HORTICULTURAL ABSTRACTS

VOLUME X

Part 1 Issued March, 1940

Part 2 " June, 1940

Part 3 " September, 1940

Part 4 ,, December, 1940

Compiled and published by the IMPERIAL BUREAU OF HORTICULTURE AND PLANTATION CROPS, EAST MALLING, KENT, ENGLAND

Horticultural Abstracts, Vol. X

Abaya, F. Q., 678 Acharya, C. N., 234, (921) Adam, W. B., 756, 1525, 1526, 1528, 1529, (1542) Adamanov, F. O., 943 Adriance, G. W., 1265 Agati, J. A., 148 Ageev, L. A., 1145 Agnew, E. L., 893 Agricultural Advisers to Secretary of State, 1235 Secretary of State, 1235 Ainsworth, G. C., 1027, (1086) Akenhead, D., 793 Akimoto, S., 1427 Albrecht, W. A., 1031 Alden, C. H., (1378) Alderman, W. H., 1230 Aldrich, W. W., 1148 Algazin, V. S., 1399 Algeneen Landbouw Syndicaat, Dutch East Indies, 1569 Allen, F. W., 1228 Allen, H. W., 1002, (1378) Allen, R. J. L., (378) Allison, F. E., 830 Allwright, W., 1242 Allwengor, A. A., 266 Alnarp, 1552 Alstatt, G. E., 162, 1073 Amatt, J., 859 American Potash Institute, 35 Anagnostopoulos, P. T., 758 Anantanarayanan, K. P., 298 Anderson, J. P., (850). Anderson, P. O., 1360 Anderssen, E. E., (1400) Andrews, J. K., (921) Angeli, G., 72 Angelo, E., 515, (1158) Angelo, E., 515, (1158)
d'Angremond, A., 700
Anisimov, N. I., (351)
Anliker, J., 58
Anon., 110, 166, 169, 205, (226), 258, 275, 294, 384, 387, (388), 389, 486, 513, 544, 545, 549, (555), 556, 564, 566, 588, (598), 626, (657), 660, 708, 717, 736, 336, 892, 913, 919, 1015, 1052, 1087, 1389, 1425
Anson, P. V., 262
Anthony, W. G., 1343
Antenor, C. S., (765)
Anthony, R. D., 502
Antigua, (450)
Antoniani, C., 1103 Antoniani, C., 1103 Antonyuk, A., 1030 Appleman, D., (1240) Arendt, N. K., 482 Areshkina, L. Ya., 1121

Arizona, (1589) Ark, P. A., 531 Arkansas, 1553 Armstrong, S. F., 595 Armstrong, T., 1370 Arnold, E. L., 1511 Arnon, D. I., 28, 33, 34, 1274 Arnsdorff, A., 394 Arroyo, R., 1535 Artsikhovsky, V. M., (1304) Asami, Y., 878 Ashby, H. K., 663 Ashby, H. K., 663 Ashby, M., 658 Askew, H. O., 960, 1353 Assam, 1554, (1589) Atkinson, F. E., 602, 753, 754 Australia, C.S.I.R., 1270 Avery, G. S., (460), 815 Aylen, D., 901, 1296 Baba, T., (1542) Babb, M. F., 594 Babb, M. F., 594 Bacon, A. L., 951 Badhwar, R. L., 675 Baerg, W. J., 991 Baes, R. P., 1208 Bagenal, N. B., 855 Bailey, J. S., 512 Bain, F. M., 710 Baker, A. C., 559 Baker, K. F., 1211 Baker, R. E. D., 714, (725), 1129 Baktadze, K. E., 682 Balás, G., 551 Ballenegger, R., 490, 504, 505, 1322, 1326 Balls, A. K., 1542 Batts, A. K., 1942
Banga, O., 590
Bangham, W. N., 700
Barabanov, P. N., 1490
Barclay, C., 277
Barger, W. R., 737
Barker, J., 357, 371, 372, 376, 377, (378)
Barnell, H. R., 367, 368, 369, 1507 1507 Barnes, H., 653 Barnes, H. F., 176, (1114) Barnett, R. J., 909 Bartlett, K. A., 1509 Barton, L. V., 805, 807 Baruda, P. K., 252 Basinger A. J. 1135 Basinger, A. J., 1135 Basutoland, 1555 Bates, G. H., 458 Bates, G. R., (460), 1250 Batjer, L. P., 499, 874, 880, 891, 898, 918, (921)

Beard, F. H., 168, 1093 Beard, F. H., 168, 1093 Beaulieu, A. A., (1378) Beaulieu, A. A., (1378) Beaumont, J. H., 265 Becker, J., (755) Bedford, C. L., 1239 Beijer, J. J., 1403 Belgrave, W. N. C., 440 Bell, H. P., 63, 498 Belozersky, A. N., (1086) de Belsunce, G., 273 Benediktova, E., 133 Benediktova, E., 133 Bensaúde, M., 1130 Benton, W. A., 84 Berkeley, G. H., 1395 Berkner, F., 828 Bernon, G., 105, 938, 942, Berry, W. E., 925, 1016, 1317, 1484 Besoekisch Proefstation Rubber, Koffie en Tabak, Betrem, J. G., 1192 Bevan, W. H. C., 1386 Bewley, W. F., 1024, 1025, 1026 Beyers, E., 348, 349, 350 Bhowmick, H. K., 1164 Biale, J. B., 1233, (1240), 1518 Birch, H. F., 1468 Black, M. W., 906 Blair, D. S., 55 Blake, M. A., (921) Blumenthal, S., (1258) Bobb, M. L., 561 Bogdanov, N., (664) Bohn, G. W., (1400) du Bois, C. W., 1512 Bois, E. J., 582 Boischot, P., 196 Bonnemaison, L., 1075 Bonner, D. M., 453, (460) Bonner, J., 453, (460), 820, (1284) Bora, M., 1443 Boron Agricultural Bureau, 835
Borsacov, V., 1436
Bortner, C. E., 1089
Bosher, J. E., 187
Boswell, V. R., 1034, 1035
Bottomley, A. M., 611
Botvinosky, V. V., 1104
Bourne, A. I., 512
Bovien, P., 1003
Bowers, F. A. I., 250
Bowman, F. T., 492
Rowman, I. J., 61, 978, 13 835 Bowman, J. J., 61, 978, 1312 Boyce, A. M., 1133 Boyes, W. W., 318, 335, 341, 343, 352, 353 Boynton, D., 874, (921), 959

Bausor, S. C., 1066 Baynes, W. C., (921) Beacham, L. M., 757 Beakbane, A. B., 986

Bradford, F. C., 1314
Braid, K. W., 1376
Branas, J., 103, 104, 105, 942
Brandenburg, E., 470
Brandtsegg, O., 446
Brase, K. D., 867
Bratley, C. O., 731, (1240)
Braverman, J. B. S., 395
Bregger, J. T., 904
Bregman, A., 1193
Bremer, A. H., 446
Briant, A. K., 1169
Brichet, J., 213
Brien, R. M., 98, 170, 1074, 1364
Brierley, P., 1112 Brierley, P., 1112 Brierley, W. G., 515, 1337 Brison, F. R., 1265 British Guiana, (450), 792 British Guiana, (450), 792
British Honduras, 1556
British South Africa Company [Mazoe], 773
Britton, J. E., 916, 1513, 1516
Broadbent, H. R., 826
Brody, H. W., 893
Broekema, C., 1522 Brooks, C., 1221 Brooks, F. A., 204 Brooks, R. M., (950) Brown, A. C., (648) Brown, A. G., 495 Brown, E. M., 27 Brown, H. E., 1372 Brown, J. G., 900, 912 Brown, R. T., 1143, (1158) Brown, W. S., (950) Browne, F. S., 519 Browne, F. S., 519

Bruni, B., 933

Brunson, M. H., 1002

Brunstetter, B. C., (921)

Bryant, L. R., 872

Bryden, J. D., 215

Bryner, W., 488

Buckley, F. E., 1495

Bucksteeg, W., 542

Bugini, F., 62, 65, 887

Buitenzorg, Department van

economische zaken, economische zaken, Dienst van den land-Dienst van den land-bouw, (1214)
Bunyard, E. A., 48
Burkholder, C. L., 891
Burkill, I. H., 1549
Burlison, W. L., 1078, (1086)
Burma, Department of Agriculture, (313), (450), Burns, W., 1213 Burrell, A. B., 471, 955 Burrell, P. C., 1060 Buslova, E., 842 Butterfield, N. W., 819 du Buy, H. G., (1284) Buzin, N. P., (83) Bykovsky, V. Ya., 134

Calidiore, E., 631

C., 1456

California, 1558 Calinisan, M. R., 680 Calma, V. C., 289 Calvino, M., 247, 274 Camargo, F. C., 302 Cambridge, National Institute of Agricultural Botany, 1044, (1589)
Cameron, A. E., 137
Cameron, C., 1435
Campbell, B. A., 920, 1334
Campbell, I. W., 310 Canada, 414
Canada, Department of Agriculture, (431), 1559, 1560, (1587)
Canada, Minister of Agriculture, 1561 Canada, National Research Council, (431), 432, 780. Caplan, S., (1542) Capucci, C., 82 Cardinell, H. A., 861 Carne, W. M., 727 Carnegie Institution of Washington, 1562 Carpenter, P. H., 794 Casella, D., 522 Cass-Smith, W. P., 981 Castelli, T., 1081 Castetts, G., 1018 Caulfield-Kelly, E., 1540 Ceylon, Coconut Research Scheme, 1563 Ceylon, Department of Agriculture, 401 Ceylon, Director of Agriculture, 1564 Ceylon, Journal of Science, 430 Ceylon, Rubber Research Board, (450), 1565 Ceylon, Tea Research Institute, 1441, 1566, 1567
Chabrolin, C., 1150
Chadwick, L. C., 798
Challis, B. G., 1430
Chamberlain, E. E., 610, 1074
Chandler, F. B., (950), 1341
Chandler, S. C., (1378)
Chapman, G., 1122
Chapman, H. D., 192, 193, 636
Chappellier, A., 1004
Charley, V. L. S., 857, 1246, 1247, 1248
Chassant, M., 1533
Cheal, W. F., 975
Cheesman, E. C., 1458
Chek, G., 552
Cherian, M. C., 298
Chernova, A. K., 624 Ceylon, Tea Research Insti-Chernova, A. K., 624 Chevalier, A., 507, 587, 705 Cheyne, O. B. M., 711 Child, R., 235, 400, 711, 760, 1256 Childers, N. F., 893 Chittenden, E., 472, 960

Chittenden, F. J., 22 Chitwood, B. G., 1048 Chkhaidze, I., 1174 Cholodny, N. G., 457, 810, Chopra, R. N., 675 Chorin, M., (165) Chown, W. F., 920 Christensen, B. E., 1225 Christopher, E. P., 917 Christopher, E. P., 917
Chronica Botanica, 1550
Chulkin, M., 622
Cidrais, J., 1252
Ciferri, R., 1014, 1506, 1519
Clapp, L. E., (1304)
Clark, J. A., 1306
Clark, J. H., 924, (950)
Clarke, G. H., 575
Claypool, L. L., 1219
Cleare, I. D., 1431
Cochran, F. D., (1114)
Cochran, H. L., 140, 1388
Cocout Research Scheme,
Cevlon, 1563 Ceylon, 1563
Coeytaux, H., 1150
Colby, A. S., (950)
Colenbrander, G. H., 1198
Collins, J. L., 1211
Collison, R. C., 1325
Colored, (1580) Colorado, (1589) Comité pomologique (Morocco), 44
Commitée on Chemical Methods, 464
Compere, H., 225, (226)
Condit, I. J., 413, 1206
Cook, M. T., (1378)
Cook, F. C., 399
Cooley, J. S., 541
Cooper, C. E. B., 382
Cooper, E. R., 732
Cooper, H. R., 256, 1444
Cooper, J. R., 1380
Cooper, St. G. C., 1469
Cooper, T. P., 1313
Cooper, W. C., 1137, 1212
Cope, F. W., 1459, 1460, 1461
Cordner, H. B., 1041
Cornu, C., 569 Comité pomologique Cornut, C., 569 Cortut, C., 569 Cotterell, G. S., 1422 Coulter, R. W., 998 Cowie, G. A., 1042 Cox, J. A., (1378) Cox, T. R., 838 C, P., 155 Crandall, F. K., 1064 Crane, M. B., 157, 483, 922, 923, (1304) Crang, B. A., 1251 Crawford, C. L., 1148 Crawfold, C. J., 1448 Cremer, M. C., 1404 Crist, J. W., 53, 54, (850) Croce, F. M., 392 Cronk, J., 863 Cronshey, J. F. H., 277 Cross, W. E., 1536

Croucher, H. H., 1209
Crous, P. A., 359
Crowdy, S. H., 714
Crowther, E. M., 1487
Croxall, H. E., 19, 808, 1084
Cruess, W. V., 210, 1216
Cruz-Monclova, H., 1437, 1492
C.S. I.R., Australia, 1270
Cullinan, F. P., 899, (921), 965
Culpepper, C. W., 146, 147
Culver, L. B., 77
Cummings, M. B., 1324
Cunningham, C. R., (1086)
Cupery, H., 1007
Curtis, K. M., 606
Cutright, C. R., (1378)
Cyprus, 433

Daldy, Y., 1294 Dallas, W. K., 1074 Dameron, W. H., 223 Dane, F., 107 Dares, T., 941 Darlington, H. T., 77 Darrow, G. M., (950) Dartois, E., 1167 Davidson, R. W., 541 Davies, C., 1374 Davies, R., 335, 341, 343, 382 Davis, M. B., 896 Day, L. H., (866) De, S. C., 1164 Dean, L. A., 264 Dearborn, C. H., 1054 Decoux, G. J., 730 Degman, E. S., 898 Dehn, W. M., 32 Dekker, G. H. W. D., 1541 Delaware, 774 Delaware, 774
Delmas, —, 92
Delorme, N., 1334
Demidenko, T. T., 1299
Denham, J. H., 768
Denmark, 99
Dennis, R. W. G., (1086)
Dennison, R., 1273
Denston, T. C., 694
Denartment (see under con Department (see under country or institute concerned) Department van economische zaken, Dienst van den landbouw, Buitenzorg, (1214)
Descartes, S. L., 1428
Development Commission, Lond., 1568
Devonshire, C. R., 404
Dey, P. K., 111
Dhodapkar, D. R., 696
Diachenko, A. E., 1348
Diakonov, A. P., (351)
Dicker, G. H. L., 553, 994, 1361 Dickey, R. D., 174 Dickson, G. H., 73 Dijkman, M. J., 279 Dimmock, F., 608 Dix, I. W., (921)

Doak, B. W., 31 Dodge, F. N., (950) Dolgopolov, M., 1023 Dolgov, S., 683 Dolgov, S., 683 Dominica, (450), (1589) Domokos, J., 491 Doneen, L. D., (1086) Donen, I., 733 van Doren, C. A., 1078 Dorsey, M. J., 501 Doyle, P. E., 1334 Draper, G. E., (1136) Dreosti, G. M., 315, 352, 381, (383)Driggers, B. F., 1002 Driggers, D. F., 1002 Drouineau, G., 36 Drummond, O. A., 1155 D.S.I.R., London, 1271 D.S.I.R., New Zealand, 444, 445, 1581 Ducomet, V., (1086) Duggar, B. M., 16, 17 Dullum, N. 76 Dullum, N., 76 Dulzetto, F., 206 Dumonthay, J., 514 Duncan, I. J., 572 Dunkelberg, G. H., 1140 Dunkle, E. C., 502 Dunning, R. G., 1324 Dustman, R. B., 572 Dutch East Indies, Algemeen Landbouw Syndicaat, Dwyer, R. E. P., 296, 1501 Eastwood, H. W., 299, 654 Eaton, F. M., 817, 837 Eaton, S. V., 468 Ebeling, W., (568) Eden, T., 235 Edgecombe, S. W., 1329, 1347 Edinburgh and East of Scotland College of Agriculland College of Agr ture, 775 Edmond, J. B., 1140, Edmundson, W. C., 1036 Eggers, V., (821) Eggert, R. L., 1342 Eguchi, T., 78 Eide, C. J., (1378) Eidelman, Z. M., 1019 Eig, A. (226) Fire (450) Eire, (450) Erre, (490) El-Helaly, A. F., 164 Elsworth, F. C., 391 Eltinge, E. T., 1394 Elwell, W. E., 32 van Emden, J. H., 254 Emerson, R., (847) Emmert, E. M., (850) Emsweller, S. L., 144, 1112 Enikeev, Kh. K., 1309 Eoff, J. R., Jr., 393 E.P., 528

Evreinoff, V. A., 489, 510 Evtushenko, G. A., 171 Eyre, J. C., (1136) Fahey, J. E., 573, (1378)
Faria, D. de C., 1196
Farkas, A., 362
Farrar, J. L., 5
Fauvel, J. H., 1406
Fawcett, G. L., 1420
Fawcett, H. S., 642
Fedin, A. Kh., 634
Fedorov, D. A., 1063
Feilden, G.St.Cl., 772
Fellagara C. 1095 Fellagara, C., 1095 Fennah, R. G., 1115, (1423) Fenwicke-Clennell, C. E., 1181 Fernucke-Cleinferl, 25., Ferguson, W., 467 Fernando, M., 251, 271 Fernie, L. M., 690 Ferrand, M., 1480, 1481 Ferwerda, F. P., 1477 Fesenkova, N. G., (1158) Fesenkova, N. G., (1138 Fidler, J. C., 360 Fiedler, H., 402 Fikry, A., 122, 156, 178 Filinger, G. A., 909 Filosofova, T. P., 1309 Finch, A. H., (950), 1127 Finlay, R. H., 1301 Finlay, R. H., 1301
Fischer, H., 534
Fish, S., 161
Fisher, D. F., 1035, 1232
Fisher, D. V., 916, 1221, (1258), 1513, 1516
Fitzgerald, C. D., (1258)
Flanzy, M., 1245
Fleming, W. M., 602
de Fluiter, H. J., 263, 1171
Foex, E., (1086)
Ford, C. E., 1475
Fore, R. E., 1092
Fortunatov, I. K., 481 Fortunatov, I. K., 481 Foscolo, E., 244
Frazier, W. A., 1385
Freeman, H. J., 600
de Freitas, A. G. B., 939
Friend, W. H., 833 Froggatt, J. L., 238, 297, 398 Frolov, T. V., 1144 Fruitgrowers' Federation of N.S. Wales, 442 Fulling, E. H., 1262 Funke, G. L., 20 Furlong, C. R., 357 Furr, J. R., 1119 Furtado, C. X., 721, 723 Gadd, C. H., 686, 687, 1447 Gager, C. S., 4 Gallotti, M., 1014, 1095, 1519 Ganapathy, C. V., (765) Gandhi, S. R., 203 Gane, R., 331 Gapon, E. N., (42) Gardner, F. E., 499, 500, 891, (921) Gardner, V. R., 880

Eremeev, G. N., 94, 963

Evans, G., 1186

Garner, R. J., 772, 862 Garrett, S. D., 525 Gashkova, O. A., 200 Gattefosse, J., 189 Gaugain, S., 477 Gavrilov, K. I., 1275 Gavrilov, K. I., 1275
Gavrilova, L. G., 944
Gayel', A., 224
Gearreald, T. N., 52
Gehlsen, C. A., 681
Georgi, C. D. V., 240, 241, 242, 663, 676, 1432
Gerbaldi, C., 1001
Gericke, W. F., 1544
Gerner, G., 843
Gerritsen, J. D., 988
Geslin, H., 966
de Geus, J. G., 255
Gibberd, A. V., 1470, 1508
Giesberger, G., 1187
Gigante, R., 529
Gillett, S., 1178
Gilliat, C., 1483
Gimingham, C. T., 989 Gimingham, C. T., 989 Gimingham, C. T., 989
Ginai, M. A., 119
Ginsburg, J. M., 999, (1378)
Glasscock, R. H., 1397
Gnadinger, C. B., 998
Gocholashvili, M. M., 1125
Goddard, D. R., (1086)
Godfrey, W., 1021
Godney, T. N., (847)
Goetz, O., 770
Goia, G., 1001
Goidanich, G., 591
Goldberg, E., (460)
Gold Coast Colony, (450)
Golovin, P., 1141 Golovin, P., 1141 Gómez, L. A., 1449, 1450, 1453, 1454 Gonçalves, A. P., 1165 Goncharenko, F. I., 589 Gonzalez, L. G., 707 Gorbovsky, A. G., 457, 810, 1278 Gordon, W. E., 840 Gorrie, R. M., 231, 232 Gosselin, A., 1334 Got, N., 49 Got, N., 49
Gould, H. P., 1424
Gourley, J. H., 503, (921)
Grace, N. H., 10, 11, 12, 13, 14,
15, (460), 802, 803
Graham, G. R., 715
Grainger, C. E., 926
Grainger, J., 846, 969
Greene, J., (460), 820
Greenslade, R. M., 124, 976
Greenstein, E. J., 584
Gregory, E. J., 201
Gregory, J. H., 303, 743
Gregory, P. H., (1405)
Grenada, (450)
Greve, E. W., 1333
Gribko, N. P., 583
Gridin, I. F., 1387
Griffiths, D. G., 328, 330
Grist, D. H., (450)

Gross, E. W., (1284) Grubb, N. H., 871 Grüner, M. N., 485 Guadagnin, L., 1153 Guatemala, Dirección General de Agricultura, 307 Guest, E., 286 Guillaume, A., 243 Guiscafré-Arrillaga, J., 1449, 1450, 1453, 1454 Gustafson, F. G., 160 Guthrie, J. D., 6 Gutiev, G. T., 661 Gwynn, R. I. M., 1482 H., A. G., 1162 de Haan, I., 254, 684 Haas, A. R. C., 1413 Haber, E. S., 1384 Hackleman, J. C., 1078 Hadorn, Ch., 982 Haeussler, G. J., (1378) Hagiwara, T., 1383 Haigh, J. C., 309, 312 Haines, W. B., 1487 Haigh, J. C., 309, 312
Haines, W. B., 1487
Halcrow, M., 257
Hales, K. C., (383), 1515
Halewijn, E. K. E., 1541
Hall, A. D., 526
Hall, E. G., 729
Hall, E. R., 493
Haller, M. H., 342
Halma, F. F., 1118
Hamilton, J., 86
Hammond, D. H., 862
Hammer, C. L., (1086)
Hamner, C. C., (383), 1515
Hardison, P. L., 237)
Hardy, F., 1429, 1463, (1510)
Hardy, J. K., (383), 1515
Hardy, M. B., (950)
Hargrave, J., 181, 182, 183
Harley, C. P., 880, 884
Harman, S. W., 997
Harmon, F. N., 937, 1344
Harrington, J. F., 1064
Harris, R. V., 102, (952), 974, 986
Harrison, A. L., 1073 986 Harrison, A. L., 1073 Harrison, A. L., 1073 Harrison, C. J., (765) Harrison, J. A., (847) Hartman, J. D., 1072 Hartung, M. E., 293 Harvey, M. T., (1542) Harvey, R. B., 1220 Haseman, L., 1371, 1372 Hastings, R. J., 187 Hatton, R. G., 168, 865, 1264 Hausmann, W., 829 Havemann, A. R., 1305

Hawker, L. E., 1113 Hawthorn, L. R., 740, 1064 Hayward, K. J., 1373 Heald, F. D., 324 Heiger, E. F., 613 Heinicke, A. J., 959 Heinze, P. H., 1289 Henderson, I. F., 408 Henderson, W. D., 408 Hendrickson, A. H., (1258) Hendrickx, F. L., 1433 Hennard, P., 1163 Henry, V. M., 767 Hepting, G. H., 625 Herbert, D. A., 972 Hervé, G., 243 Hesv, G., 243 Hess, A. D., 1367 Hester, J. B., 1064, (1400) Hibbard, A. D., (1086) Hibbard, P. L., 1356 Hickman, C. J., 987, 1084 Hida, M., 197 Hida, M., 197 Hildebrand, A. A., 123 Hildebrand, E. M., 880 Hilgeman, R. H., (1136), 1231 Hill, E. B., 1428 Hill, H., 962, 1391 Hing, T. K., 1434 Hiramatsu, B., 197 Hirst, F., 1525, 1526, 1528 Hitchcock, A. E., 796, 797 Hirst, F., 1525, 1526, 1528 Hitchcock, A. E., 796, 797 Hoagland, D. R., 28, (847) Hoar, T. P., 756 Hobbis, E. W., 47 Hoblyn, T., 1316 Hodgkins, W. S., 1290 Hodgson, R. W., 1146 Hodson, W. E. H., 422 Hoerner, G. R., 1090, 1398 Hoffman, I. C., 1064 Hoffman, M. B., 891 Hofmeyr, J. D. J., (657) Hoffman, M. B., 891 Hofmeyr, J. D. J., (657) Hoh, H. C., 662 Höhn, E., 761 Holloway, J. K., (1378) Holm, J. M., 1147 Holman, H. J., 1267 Holttum, R. E., 719, 723 Holubinskaya, N. I., 1094 Holubinsky, I. N., 1094 Holz, W., 109, 983 Hoover, S. R., 830 Hopkins, J. C. F., 651, 951 Hopper, W. C., 920 Horn, Ch., 1493 Horn, Ch., 1493 van Horn, C. W., (950) Hornbostel, W., 537 Horne, A. S., 325, 326 Horner, G., 1527 Horticultural Education Asso-Ciation, 434
Horton, D. E., 180, 184, 185
Hough, L. F., 879
Houghtaling, H. B., 160
Howard, A., 38, 1076, 1259
Howard, F. L., 1064
Howard, H. W., 1281
Howell Harris, G., 509

Havis, L., 93 Hawai, I., (1378) Hawaii, 776

Howlett, F. S., 880, 1067
Hudson, J. P., 177
Hufford, G. N., (598)
Hugo, F. C., 95
Hull, R., 1253
Hulme, A. C., 319, 320, 322
Hülsenberg, H., 1051
van Hulssen, C. J., 1194
Humbert, A., 521
Hume, E. P., (847)
"Humphrey John," 768
Humphrey, E. C., 1464, 1465, 1466
Hunt, E. M., 1336
Hunt, E. M., 1336
Huntley-Wilkinson, C., 1446
Hurd-Karrer, A. M., 578
Husfeld, B., 80, (950)
Husz, B., 543, 1355
Hutchins, A. E., (1400)
Hutchinson, J., 673
Hutson, J. C., 270
Huyskes, J. A., 1046
Hwang, L., 361
Hwang, Y., 7
Hylmö, B., 1552
Hynes, H. J., 163

Ibatulina, F. S., (128) Ibryaev, I., 1030 Iljin, W. S., 834, 1286 Illinois, 777 Imperial Agricultural Research Institute, New Delhi, (1589) Imperial Bureau of Horti-culture, East Malling, 772 Imperial College of Tropical Agriculture, Trinidad. 1584 Imperial Council of Agricultural Research, India, 790, 1572, 1573 Imperial Economic Committee, London, 419 Imperial Institute, 1267 Imperial Research Institute, New Delhi, (450) India, Department of Education, Health and Lands, 1573 India, Imperial Council of Agricultural Research, 790, 1571, 1572
Indian Tea Association:
Scientific Department, 435, 1172 I.N.E.A.C., 436 Institute of Plant Industry, Leningrad, (1587)
International Institute of Agriculture, Rome, 410, 411, 412 Iowa, 1574 Isaac, W. E., 318, 337 Isaev, S. I., 1382 Isherwood, F. A., (378)

Ivanov, S. M., 1414, 1415, 1416 Iverson, V. E., 515 Iwata, H., 56 Iyer, S. S., (850) Jack, H. W., 397

Jack, H. W., 397 Jacks, G. V., 1543 Jacob, F. M., 992 Jacob, W. C., 823 Jamaica, 1575 Jamaica Agricultural Society, 403

Jameson, D. H., 35 Jamieson, C. A., (1335) Jary, S. G., 1374 Jenny, J., 386, 748 Jepson, W. F., 306 Joachim, A. W. R., (208) John Innes, 437, 1576 Johnson, R., 1169 Johnson, E. L., 25 Johnson, F., 1083 Johnson, G. C., 1038 Johnson, L. R., (1086)

Johnson, L. R., (1086) Johnston, F. B., 962 Johnston, J. C., 825 Johnston, S., (950)

Johnstone, K. H., 424, 425, 426 Joley II 1314

Joley, Ll., 1314 Jones, H. A., 144, 1082 Jones, H. L., 620 Jones, H. N., 1182 Jones, J. O., 956, 957 Jones, W. W., 292, (1158), (1542)

de Jong, J. J., 1548 de Jong, W., (1423) Joshi, B. M., 1238 Joslyn, M. A., 1239 Juliá, F., 1438, 1473

Kains, M. G., 409
Kalishevich, S. V., (847)
Kalmykov, S. S., 1138
Kaminsky, S., 579
Karmarkar, D. V., 1238
Karraker, P. E., 1089
Karsten, K. S., 824
Kasahara, Z., 1280
Kassab, A., 221
Katar'yan, T. G., 639
Katétov, V., 139
Kaufmann, H. P., 402
Kearns, H. G. H., 864, 993, 1008, 1009
Keiller, P. A., 236

Keiller, P. A., 236 Keitt, G. W., 539 Kemp, H. K., 532 Kenneth, J. H., 408 Kenworthy, A. L., 893

Kenya, 438 Kerbosch, M., 697 Kertesz, Z. I., 1071, 1254, 1288

Khaev, M. K., 599 Khan, A. A., 1205 Khanmai, M. A., (950)
Kharitonova, S. M., 1096
Khashba, L. Kh., 131
Khazina, E., 159
Kholodny, N. G., see
Cholodny, N. G., 322, 323, 328, 329, 330, 332
Kidson, E. B., 960
Kienholz, J. R., 108
King, H. C., 233
King, M. E., 974
Kinoshita, S., 1280
Kirchner, H. A., 558
Kirkpatrick, H., 1279
Kiselev, I. S., 1101
Kiseleva, V. V., 1299
Kisliuk, M., 1217
Kislov, V. P., (847)
Kivilaan, A., 971
Klein, H. Z., 1421
Klimenco, K., 191, 195
Klotz, L. J., 198, 361, 642, 1417
Klyushkin, P. A., 669
Knoche, W., 1436
Knott, J. E., 1049
Knowlton, K. R., 1137
Kobel, F., 58, 496, 877
Koch, L. W., 1395

Koch, L., W., 1395
Koechert, R. E., (1136)
Kolesnikov, A. I., 41
Kolodny, L., 1068
Kondon, I. N., 518
Konstantinov, V. M., 1117
Koolhaas, D. R., 268
Kopetz, L. M., 151
Kosar, W. F., 154
Kovalev, N. V., (75), 480
Kozhin, A. E., 220
Kramer, P. J., 466, (847)
Krashennikov, N. A., 1145
Kraus, J. E., 594
Krauss, B. H., 304, 305, (718)
Kreier, G. K., 698
Krevchenko, L. E., 596

Krickl, M., 143
Kriel, J., 359
Krijthe, E., 494
Krimpas, B., 941
Krishnan, P. S., (765)
Krishnaswamy, T. K., (765)
Krone, B. P., 1393
Krug, C. A., 689
Kruzhalin, A. S., (1105)
Kudryavtseva, A. A., 473
Kuhlmann, G. W., 1092
Kuprianov, I., 1139
Kusamitu, H., 1383
Kuzmenko, A. A., 1039
Kuzmin, A. Ya., 927

Lagatu, H., (83) Lalykin, N. S., 1392 Lamb, S. H., (674) Lamerson, P. G., 562

Lamm, R., 1552 Landon, R. H., 515, 1230 Lange Ossekampen, 1577 Laptev, I. I., 130 Larsen, J. A., (506) Larsen, V., 550 La Rue, C. D., (460) Latimer, L. P., (921) Laughland, D. H., 609 Laughland, J., 609 Laurie, A., 173, 1106, 1260 Lavruk, S., 1019 Lawrence, W. J. C., (1114) Leach, R., 1176 Leatherman, M., 1034 Ledeboer, M., 1340 Ledeboer, M. S. J., 494 Lee, F. A., 1331 Lefevre, P. C., 244 Leggeri, G., 759 Lenander, S. E., 1552 Lenin Academy of Agricultural Sciences, grad, 415, (1587) Leningrad, Institute of Plant Industry, (1587) Leonard, E. R., 366, 367, 369, 1236 Lepa, P., 1489 Lesley, J. W., 1308 Leslie, W. R., 1021 Levadoux, L., 105, 942, (950) Lewis, C. M., (847) Lewis, D., 483, (1338) Lewis, H. C., 1131 Lewis, I. P., 93 Liebig, G. F., 1122 Lijftogt, G., 902 Lilleland, O., 900, 912 Limaset P. (1086) Limasset, P., (1086) Lincoln, F. B., 859 Lindgren, D. L., 1156 Line, C. W. J., 1407 Linford, M. B., (1510) Link, C., 173 Link, G. K. K., (821) Linktsyn, D. I., 1102 Litvinov, L. S., 1062, 1065 Lloyd, J. W., (1086), 1227, 1381 Locke, S. B., 16, 17 Loconti, J. D., 1071, 1254 von Loesecke, H. W., 752 London, Imperial Economic Committee, 419 London, Ministry of Agri-culture; 125, 420, 421, 423, 428, (1588) Long, J. H., 929 Longley, L. E., 860 Loo, S. W., 1283 Lopez, D. R., 1524 Loree, R. E., (516) Louisiana, 439 Lubatti, O. F., 1218 Lucy, A. B., 241, 1442, 1445, 1496, 1498 Ludbrook, W. V., 1358

Ludwig, C. A., 830 Lueck, R. H., 750 Lukianov, N. I., 1062 Lutri I., 90 Lutz, H., (950) Lyle, E. W., 1110 Lysenko, T. D., 1379

Maath, P. C., 499 Mabbun, P. N., 1208 MacArthur, M., 954 MacArthur, M., 994 McCallan, E. A., 672 McCance, R. A., 769 McCleery, F. C., 207 McClintock, J. A., 819, 873 McCollum, J. P., 1381 McComb, A. L., 832 McCown, M., 891 McCrory, S. A., 1375 McCubbin, E. N., 1040 MacDaniels, L. H., 880 McDonald, J., 433 McDonald, S. L., 67 McGeorge, W. T., 1127, 1385 MacGillivray, J. H., (1086), McHargue, J. S., 1290 McIlvaine, H. R. C., 809 Mack, W. B., 135, 136, 839, 1390 McKay, J. W., (950) McKay, R., 145 McKenzie, H. L., 1156 McKinney, H. H., 462 McLellan, J. W., 63 McLelland, C. K., 1396 McMunn, R. L., (921) McQuesten, L. M., 409 McChail, M., 560
McPhail, M., 560
McVeigh, W. J., 393
MacVicar, R. M., 585
Madras, 778, 779
Magee, C. J. P., 716
Magness, J. R., 874, 880, 918
Magoon, C. A., (921)
Mahalanobis, P. C., (850) Maher, C., (1214) Maier, W., 574 Maki, S., 948 Malaya, 440 Malaya, Rubber Research Malayan Agricultural Statistics, (450) Malcolm, J., 1300 Malik, S. A., 290 Malivaiko, Yu. S., 1099 Mallik, A. K., 26 Manaresi, A., -1 Maney, T. J., (921), 1347 Mangel, N. R., 1439 Marangoni, P., 1095 Marani, M., 1001 Marassi, A., 1166

Markov, V. M., 1392 Marloth, R. H., 1408 Marques de Almeida, C. R., 845 Marsais, P., 106 Marsh, P. B., (1086) Marsh, R. W., 977, 1013 Marshall, G. E., 996 Marth, P. C., 891, (921) Martin, E., 1007 Martin, H., 567, 993, 1008, 1261, 1374 Martin, J. T., 1011 Martin, W. E., 202, 1127, 1231 Mason, I. C., (1208) Mason, T. G., 1298 Mason, M., 1251 Masse, A. M., 976, 990 Massey, L. M., 621 Mathiesen, A., 970 Mathieu, G., 37 Matskevich, V. B., 465 Matswarte, K. 735 Matsumoto, K., 735 Matsumoto, K., 735 Matsuo, S., 78 Matubara, S., 948 Mauerhan, C. J., 1135 Maume, L., (83) Mauri, G., 18 Mauri, N., 18 Mauritius, (1589) Mayfield, H. L., 1521 Mayne, W. W., 260 Mazoe, 773 Meader, E. M., (921) Meahl, R. P., 799 Medical Research Council, 769 Mehta, P. R., 112 Meier, K., 488, 523, 533, 958 Meier, N. F., (563) Meijer, T. M., 1194 Meijer, I. M., 1194 Meijers, P. G., 827 Melville, A. R., 1182 Mendel, K., 632 Mendes, A. J. T., 689 Mendiola, N. B., 704 Mer, C. L., 841 Mer, cado, T., 248 Merkle, F. G., 502 Merrill, S., (950) Merrill, T. A., 511, 880, (921), (950)Metalnikof, S., 565 Metcalf, F. P., 508 Metcalfe, C. R., 4 Metlitsky, L. V., 374, 379 Mezzetti, A., 640 Mgaloblishvili, S. V., 638 Micheli, A., 45 Micklem, T., 906 Miller, D., 1005 Miller, E. V., 358, 1120, 1222, 1232 Miller, J. C., (670), 1154 Miller, N. C. E., 1491 Minarik, C. E., 1080 Ministry of Agriculture, London, 125, 420, 421, 423, 428, (1588)

Nanking, 791

Minor, F. W., 830
Mitchell, J. W., 800, 801
Mitchell, R. S., 1210
Mitchell, W. K., 1209
Mitchurin, I. V., 1268
Mitra, S. K., 1554, (1589)
Mitropolskaya, M. V., 685
Mkrtchian, V. S., 583
Molegode, W., 249, 1170
Molinary-Salés, E., 1438, 1473
Molisch, H., 1262
Momot, K. G., 699
Monakina, T. A., 475
Monro, Ltd., G., 1085
Montserrat, (450) Montserrat, (450) Moody, F. O., 398, 1539 Moon, H. H., 146, 147 Moore, E. S., (1400) Moore, G. T., 2 Moore, J. B., 998 Moore, J. E., 884 Moore, M. H., 980, 986, 1374 Moore, W. C., 427 Moquillon, —, 246 Moretti, A., 71 Morettini, A., 57, 216, 1111, 1151 Morgagni, E., 219 Morgan, N. D., 1140 Morocco, Comité Pomologique, 44
Moroz, E. S., 1126
Morris, O. H., 915
Morris, T. N., 336, 371, 372, 390, 756 Morrow, E. B., (950) Mortensen, E., 1345 Moscow Agricultural Exhibition Committee, (418) Moshkov, B. S., 29 Moskalenko, S. S., 616 Mouat, H. M., 487 Movchan, S. D., 1100 Mowry, H., 174 Moznette, G. F., 1362 Mufti-Zade, S., 1173 Muggeridge, J., 557 Mulford, F. L., (188), 618 Mullard, S. R., 848 Müller, H., 107 Müller, H. R. A., 706, (1214) Müller-Stoll, W. R., 530 Mumford, H. W., 777 Murneck, A. E., 844, 891, 911, 1289, 1332, 1546
Murphy, L. M., 893
Murray, D. B., 1467
Murray, G. H., 1440
Murray, R. K. S., 285, 287, 1485 Muscatello, G., 206 Musser, A. M., 904 Myazdrikova, M. N., 316 Myers, A. T., (921)

Nagasawa, K., 60, 882 Naik, K. C., 190 Nakashiba, K., 78

Narasimhaswamy, R. L., 691 National Institute of Agricultural Botany, Cambridge, 1044, (1589) National Research Council National Research Council of Canada, 780, 1266
Natividade, J. V., 652, (852), 856, 910, 928, 1255
Naude, C. P., 643
Naylor, A. W., 843
Neary, M. E., 1369
Nebel, B. R., 881 Nebraska, (1589) Nedolya, I. K., 667 Neff, M. S., 179 Nègre, E., 938, 1243 Negrul', A. M., 518 Nelson, R. C., 370, 728 Nesterenko, P. A., 619 New Delhi, Imperial Agricultural Research Institute, (450), (1589) Newell, W., (648) Newhall, A. G., 1048 Newrzella, B., 828 New South Wales Department of Agriculture, 68 New South Wales, Fruit-growers' Federation, 442 Newton, W., 187 New York State Horticul-tural Society, 781 New Zealand, Department of Agriculture, 443, 1578 New Zealand, D.S.I.R., 444, 445, 1579 Nicol, H., 1545 Nigeria, 782 Nikita State Botanical Gardens, Yalta, 416, 671, Nikolaev, N. F., 1302 Noble, N. S., 101, 650 Noble, R. J., 101 Nolte, A. J., 752 Northern Rhodesia, (1589) Northern Rhodesia, (1 Notini, G., 571 Notley, F. B., 1183 Nova Scotia, 1580 Nowosad, F. S., 585 Nunnick, F. C., (1587) Nutman, F. J., 1319 Nye, G. W., 1180

O'Brien, T. E. H., 405
Ochse, J. J., 1548
O'Connor, B. A., 1502
Odland, T. E., 1064
Oertel, E., 876
L'Office fédéral de guerre
pour l'alimentation
(suisse), 1531
Offutt, E. B., 1290
Ogilvie, L., 19, 808, 1084
Oleinik, G. Yu., 849
Oliveira, J. M., (1510)
Olmo, H. P., 934

Olson, R. A., (1284)
Oltarzhevsky, N. P., 115
Ono, S., 1287
Oppenheimer, C., 1320
Oppenheimer, H. R., 1418
Orchard, E. R., 1295
Orchard, O., 1028
Orth, H., 607
Orton, E. C., 1532
Osburn, M. R., (648), 1132
Osnitskaya, E. A., 605
Ostendorf, F. W., 267
Osterwalder, A., 386, 967, (1258)
Otero, I. I., (1378)
Otsuka, Y., 100
Ounsworth, L. F., 592
van Overbeek, J., 456, (460), 474, 814, 1277
Overley, F. L., 897, 1017
Overley, F. L., 897, 1017
Oyler, E., 1027
Ozerov, G. V., 1318, 1474

Pacumbaba, P. O., 679

Paech, K., 1215 Page, A. B. P., 1218 Page, A. B. F., 1216
Paillot, A., 1000
Painter, J. H., 1143, (1158)
Pal, B. P., 724
Palestine, 1581
Palilov, N. A., 739
Palllesen, A. (506) Pallesen, A., (506) Palo, M. A., 680 Pandittesekere, D. G., (208) Park, M., 251 Parker, E. R., 192, 636, 1122 Parker, K. G., 536 Parker, M. M., 1058 Parker, R. L., 562 Parker, Rhodes, A. F., 1276 Parker, Rhodes, A. F., 1276 Pascual, A., 627, 628, 629, 949 Paterson, W. G. R., 1006 Paul, M., 1323 Paul, W. R. C., 271 Paul, W. R. C., 21 Pavlov, I. P., 1022 Pearce, S. C., 124 Pearse, H. L., 7, 74 Pennsylvania, 447 Pennsylvania State Horticultural Association, 783 Pentzer, W. T., 1517
Percher, G., (1258)
Pereverzev, G. A., 668
Perlberger, J., (128)
Perotti, R., 469 Perzelan, J., 1421 Petering, H. G., 880 Petersen, A., (751) Petersen, A., (151) Petri, L., 114 Petty, B. K., 1157 Pfeil, E., 538 Phillips, E. P., 127, 577 Phillips, W. R., 1514 Phillis, E., 1298 Pickett, A. D., 1369

Pickett, B. S., 1330 Pickett, W. F., 893 Pickles, A., 1168 Pidoplichka, M. M., 979 Pieris, H. A., 308 Pile, A., (1086) Pimenova, A. S., 316 Piper, C. S., 1351 Piroyano, A., 520 Pirovano, A., 520 Pitcairn, A., 40 Pitcairn, A., 40
van der Plank, J. E., 327, 346,
347, 353, 356, 359, 363,
1234
Plant, W., 1272
Platenius, H., 373, 1523
du Plessis, S. J., 117, 118, (546)
Poesch, G. H., 1106, 1260
Polacco, F., 88
Pollacci, G., 1014, 1033, 1095,
1519 Pollacci, G., 1014, 1033, 1095, 1519
Pontis, R. E., 97
Popenoe, W., 301
Popova, G. M., (226)
Popp, H. W., 809
Porter, D. R., (1086)
Posnette, A. F., 1185, 1190
Post, K., 1032
Potapenko, J., 1310
Potapenko, Ya., 463, 517, 935
Potter, C., 1160
Potter, G. F., (1158)
Potter, J. M. S., 479, 930, 973
Potter, J. M. S., 479, 930, 973
Potter, T. I., 1203
Pound, F. J., 1184, 1188, 1191
Powell, A., 726
Prain, D., 1549
Pratt, A. M., 1179
Prescott, J. A., 228
Preston, C., (1400)
Price, J. R., (1114)
Procopio, M., 1292
Le Progrès Agricole et Viticole, 81
Prokhaprova N. T. (226) 1519 cole, 81 Cole, 81 Prokhorova, N. T., (226) Proscura, S. S., 1045 Protsenko, D. F., 1359 Prozorovskaya, L. L., (226) Prunster, R. W., 1377 Quale, H. J., 1263 Quarrell, C. P., 153 Queensland, 784 Queensland Acclimatisation Society, 785, 1582 Quiatson, S. L., 1534 Raabe, A., (615) Rabak, F., 1398 Rabak, R., 1090 Raktakanishta, X., 1204 Ramiro, M. P., 763 Randolph, U. A., 1345 Rao, Y. V., 1317 Raptopoulos, T., 497 Rasmussen, E. J., (1020) Rattray, J. M., 344, 345, 346, 353, 355, 359, 363, 1234 Raucourt, M., 1018

Rawlins, T. E., 535, 536 Rawlins, T. E., 535, 536
Rayner, M. C., 831
Raynor, R. N., 617
Read, W., 1028
Reafio, P. C., 1451
Reavell, B. N., 1247
Rebour, H., 905
Redgrove, H. S., 138
Reece, P. C., 1212
Reed, C. A., (950)
Reed, H. S., 1394
Reeve, J. O., 1119
Regeimbal, L. O., 874, 918, (921) (921)
Reid, E. P., 920
Reimers, F. E., 1056
Reimers, F. S., 461
Reinhold, J., 129
Reissler, Yu. V., 132
Repin, A. N., 597
Reuther, W., (921), 959
Reyneke, J., 116, 117
Rhoads, A. S., 1128
Rich, A. C., 1241
Richards, A. V., (1240)
Richards, M. C., 149, 540
Richardson, J. E., 1521 Richards, A. V., (1240)
Richards, M. C., 149, 540
Richardson, J. E., 1521
Richharia, R. H., 696
Rietsema, I., 1340
Riker, A. J., 16, 17
Ripley, L. B., 1157
Ritchie, T. F., 141
Rives, L., 459
Roach, W. A., 894, 1391
Robbins, W. J., 816, (1284)
Robbins, W. R., 1068
Roberts, E., 8
Roberts, E. A. H., (765)
Roberts, F. M., (1086)
Roberts, J. L., 8
Roberts, J. L., 8
Roberts, J. L., 8
Roberts, R. H., 30, 454, 1108
Robyns, W., (674)
Rodrigo, P. A., 148, 722
Rodrigues, A., 931
van Roggen, M. A., 253
Roland, G., 1055, (1086)
Romashenkov, D. D., 604
Romberg, L. D., 85, 86, 1350
Rome, International Institute
of Agriculture, 410, 411,
412 of Agriculture, 410, 411, 412 Rongo, V., 1534 Roos, K., 96 Rosedale, J. L., 720 Roux, E. R., 733, 1226 le Roux, J. C., 1152 Royal Horticultural Society, 21, 46 Royal Śwedish Academy of Agriculture, 786 Rozgon, K. N., 158 Rubber Research Board, Ceylon, (450), 1565 Rubber Research Institute of Malaya, 230, 276, 278, 281, 283, 284, 288, 406, (407), 441, 677, 701, 702, 703, 1200, 1201, 1202

Rubin, B. A., (742) Ruby (Colonel), 91 Rudorf, W., 858 Ruiz, S. R., 1448 Rusk, H. W., 573, (1378) Russell, J., 1291 Ruyle, E. H., 1254 Ruys, J. D., 478 Ryabov, I. N., 484 Ryabov, I. N., 633 Rzhevkin, A. A., 211 Sabet, Y., 1149 Sala, R. T., 385 Salgado, M. L. M., 235, 712, 1500

Salter, R. M., 822 Samoilov, V. I., (1105) Sampson, H. C., 229 Sampson, H. C., 22 Samuel, G., 1043 de Saram, F., 1482 Sarma, S. N., (765) Saso, H., 194 Sastri, B. N., (765) Sattar, A., 290 Saunders, A. P. 45 Saunders, A. R., 452 Saunders, L. H., 1547 Sayre, C. B., 1071 Sazama, R. F., 573 Scarone, F., 239 Scavone, G., 218 Scheffer, F., 829 Schellenberg, H., 747 Schellenberg, H., 747 Schermerhorn, L. G., 1140 Schmid, F. A. F., 1319 Schmidt, C. M., 35 Schmöle, J. F., 1476, 1479 Schneider, C. L., (821) Schneider, G. W., 893 Schomer, H. A., 358, 1120, Schoonover, W. R., 204, 968 Schrader, A. L., 1343 Schroeder, R. A., 1031, 1061 Schultz, E. F., 1123 (1335), 1409, 1410 Schultz, H., 593 Schuster, C. E., 1349, 1354 Schw, H., 747 Schweizer, J., 259, 1570 Science Museum Library, 429 Science Museum Library Scott, D. H., (921), 965 Scott, F. M., (460) Scott, M. J., 764 Scoville, G. P., 51 Sears, O. H., 1079 Segal, L., 106 Segues D. (1258) Segnes, D., (1258) Segnes, D., (1258) Selman, I. W., 1027 Serdobolsky, I. P., 465 Sereisky, A. S., 812, 889 Seychelles, (450) Shablovsky, B. I., 417 Shafik, M., 317 Shamel, A. D., 1116 Sharp, W. S., 1037 Shaw, F. R., 512 Shaw, L., 113

Shelton, F. A., (1400) Shepard, H. H., 741 Shephard, C. Y., 693 Shepherd, A. D., (1240) Shestialtynov, M. S., (1105) Schiff, M., 645 Shive, J. W., 1080 Shmagrina, O. T., 623 Shinghia, O. 17, 025
Shpon'ko, G. A., 1318
Shreve, F., 2
Shull, C. A., 1
Sideris, C. P., 304, 305, (718)
Siegler, E. A., 61, 978, 1312
Siegler, E. H., 997
Silenko, Z. V., (1400)
Sills, V. E., 1249
de Silva, C. A., 282, 285, 1199
Silva, R. F. E., 601, 1499
Simmen, C., 79
Simmonds, J. H., 1210
Simonov, I. N., 64
Simons, J., 1411, 1412
Singh, Lal, 1205
Singh, U. B., 111
Sipple, H. L., 750
Sircar, S. S. G., 1164
Sitton, B. G., 947
Skinner, H. T., 1107
Skoog, F., 804
Skorobogatov, M. E., 1142 Shpon'ko, G. A., 1318 Skorobogatov, M. E., 1142 Sladden, G. E., 692 van Slogteren, E., 1401, 1402, 1404 van der Sluys, G. H. J., 295 Small, J., 694 Smirnov-Loginov, V. P., (1158) Smit, B., 611 Smith, C. L., 85, 86, (87), 1350 Smith, H. F., 762 Smith, H. P., 223 Smith, H. F., 223 Smith, J. G., (1136), 1231 Smith, K. M., (1086) Smith, P. F., 455 Smith, W. H., 320, 334, 338, 339, 375, 734, 1321, 1520 339, 375, 734, 1321, 1 Smith, W. P. C., 655 Smock, R. M., 1219 Snapp, O. I., (563), (1378) Snoep, W., 1452 Snow, R., 813 Snyder, E., 937, 1344 Soares, M. de B., 1134 Soalberg, C., 446
Soesman, J. G., 1488
Sokolova, N. F., 217
Solovey, G. T., 475
Soloviey, A. P., 623
Songmani, A., 707
South Africa, Department of Agriculture, 448, 851 South Africa, Department of Agriculture and Forestry, Weeds Section, 577 South African Co-op. Deciduous Fruit Exchange, 1269 South Australia, 787 Southwick, F. W., 893

Southwick, L., 891 Southwick, R. W., 192, 636 Southwick, R. W., 192, 63 Soyer, D., 1207 Spafford, W. J., 576 Spencer, G. E. L., 1458 Spencer, H., (648) Speyer, E. R., 1028 Spiegelburg, C. H., 1530 Spinks, G. T., 1315, 1327 Staal, W., (751) Stádník, J., 139 Staehelin, M., 527 Stahel, G., 641 Staehelin, M., 527
Stahel, G., 641
Stair, E. C., 1072
Stanfield, J. F., I
Stanworth, J., (1542)
Stapel, C., 1003
Stapp, C., 107, 538
Statens Førsogsvirksomhed i
Plantekultur, 984, 1010
Stapr. V. 1366 Steer, W., 1366 Steinbauer, C. E., (1086) Steinegger, P., 58 Steiner, H. M., 121, (1378) Steiner, L. F., 573, (1378) Stene, A., (950) Stene, A., (950)
Stephenson, R. E., 1349, 1354
Steward, F. C., (847), (1400)
Stewart, W. S., 800, 818, 1282
Stirrup, H. H., (1086)
Stockdale, F., 227, (1510)
Stoffels, E. H. J., 1455
Storey, W. B., 293
Stoughton, R. H., 848
Stont A. B., 932, 1293 Stout, A. B., 932, 1293 Stout, P. R., 33, 34, (1400) Stoy, O., 888 Strachan, C. C., 754 Struckmeyer, B. E., 30, 454, Stuart, N. W., (460), 964 St. Vincent, B.W.I., 788 St. Vincent, B.W.I., 788 Subrahmanyan, V., (921) Suckling, J. J. C., 269 Sudds, R. H., 867 Sugawara, T., 1426 Suire, J., 995 Summerville, W. A. T., 300 Sveshnikova, N. M., 649, 1195 Swan C. I. 1300 Swan, C. J., 1300 Swarbrick, T., 908, 925, 977 Swartley, J., 798 Swartwoot, H. G., 1339 Swingle, C. F., 1297

Tadeosyan, P. Ya., 635
Tajima, Y., 811
Takada, K., 199
Takagi, I., 1311
Takahashi, M., 250
Talbert, T. J., 907, 1328, (1335), 1546
Tallarico, G., 214
Tanashev, G. A., 476
Tang, P. S., 1283
Tanganyika Territory, 261, (450)

Taranets, M. P., 666 Tattersfield, F., 1160 Taubenhaus, J. J., 162 Tavernier, J., 914 Taylor, C. A., 1119
Taylor, E. T., 1074
Taylor, F., 59
Taylor, H. V., 424, 425, 426 Tea Research Institute of Ceylon, 1441, 1566, 1567 Teik, G. L., 240, 241, 242, 676, Telenga, N. A., (563) Temple, C. E., 1365 Templeman, W. G., 4 Teodoro, N. G., 678 Teodoro, N. G., 678
Texas, (1589)
Tharp, W. H., 1303
Thérond, L., 1245
Thies, W. H., 903
Thimann, K. V., 3, (821)
Thistle, M. W., 14, 803
Thomas, A. S., 688
Thomas, H. E., 531, 535, 536, 621 621 Thomas, I., 992 Thomas, P. H., 1307 Thomas, P. T., 922, 923 Thomas, W., 135, 136, 839, 1390 Thomas, W. S., 1091 Thompson, C. R., 885 Thompson, F. C., 181, 182, 183 Thompson, H. C., 766 Thompson, R. C., 154
Thompson, R. R., (1542)
Thompson, S. G., 895
Thompson, W. L., 646
Thompson, W. R., 120 Thomson, R. H. K., 1353 Thomson, R. H. K., 105 Thor, C. J. B., 86, (87) Thung, T. H., 1088 Tiedjens, V. A., 1140 Tihon, L., 272 Tiller, L. W., 732 Timoshenko, S. V., 580 Timson, S. D., 665 Tincker, M. A. H., 9, 795 Tindale, G. B., 340 Tinsley, J., (1335) Tishkov, S. I., 597 Tissot, P., 630 Todhunter, E. N., 314 du Toit, M. S., 116 Tolkowsky, S., 394 Tolman, T. G., 1254 Tomkins, R. G., 325, 354, 360, 364 Tomlinson, F. R., 39 Toole, E. H., 1035 Toole, V. K., 1035 Toriño, H. G., 385 Toxopeus, H. J., 245 Trapaidze, K. G., 1177 Traub, H. P., 1212 Tressler, D. K., 1512

Trinidad, (450)

Trinidad, Imperial College of Tropical Agriculture, Tropical Agricultur 1584

Trinidad and Tobago, 1583
Tristram, G. R., (1258)
Tromp, P. H. M., 1197
Tropova, A. T., (42)
Trouvelot, B., 1018
Trushinsky, G. M., (1158)
Tsarev, M. V., 222
Tsebry, M. P., 936
Tucker, C. M., (1400)
Tufts, W. P., (866)
Tukey, H. B., 867, 1331
Tulaikova, K. P., 167
Tunstall, A. C., 1175
Turnbull, J., 886
Turner, D. M., 150
Turner, P. E., (450)
Turner, R., 709
Turnert, W. I., 767
Turrell, F. M., 198, 1417
Tydeman, H. M., 869, 870

Uber, F. M., (921) Uganda Protectorate, (450), 1585 1585
Ukrainian Academy of Science,
Institute of Botany, 1551
Ukrainian Institute of Fruit
Production, 417
Ukrainsky, V. T., 1097
Umnov, M. P., 548
Unwin, C. H., 9
Upshall, W. H., 868, (921)
Urquhart, D. H., 1505
Urushadze, D. K., 637, 1124
U.S. Department of Agriculture, 789

ture, 789

ture, 789

v. d. V., P., 883
Vacirca, M., 89
Vaidyanathan, M., (850)
Vaile, J. E., 929
Vakulin, D. Ya., 1098
Valdeyron, M., 1150
Vasiliev, V. N., (1304)
Veihmeyer, F. J., (1258)
Venkatarayan, S. V., 713
Ventress, E. W. S., 586
Vercier, J., 50
Verdoorn, I. C., 209
Vereen, T. L., (1114)
Verner, L., 953
Vidal, J. L., 1346
de Villiers, D. J. R., 335, 341, 348, 352, 353
Vineland, 1586
Vinograd, D. I., 875
Vinson, C. G., 1375
Vittoria, A., 1419
Vivoli, G., 212
van Vlack, C. H., (1304)
Voelcker, O. J., 1189, 1462
Vogel, J., 280
Vogt, S., 1244

Vollema, J. S., 279 Volten, P., 1159

Wade, B. L., 1082
Wadleigh, C. H., 1303
Wager, V. A., 644
Wain, R. L., 1397
Waite Institute, (1589)
Waldo, G. F., 929
Walker, A., 396
Walker, G., 1257
Walker, H. B., 204
Walker, W. F., 69
Wall, M. E., 1069, 1070, 1285
Wallace, T., 956, 957, 961, 1327, 1352
Walters, D. V., 1358
Walton, C. L., 1053, 1059
Wander, I. W., 503, (921)
Warcollier, G., 914
Ward, N., 1041
Wardlaw, C. W., 365, 367, 369, 714, 738, 1236, 1237
Warington, K., 1047
Warlaw, C. W., 1368
Wasser, R. E., 647
Watkin, J. E., 1042
Watkins, J. V., 1161
Watson, M. A., (1086)
Watson, R., (172)
Watts, V. M., 1380
Waugh, J. G., 66, 899, (921)
Webb, J. E., (1378)
Webster, C. C., 659
Weeds Section, Department of Agriculture and Forestry, S.Afr., 577
Weinberger, J. H., 890
Weinhardt, N. G., 612
Weiss, F., (188), 1109
Wellman, R., (1240)
Went, F. W., 818
West, C., 70, 321, 322, 323, 328, 329, 330, 332
West, E. S., 38
West, J., 1189, 1457, 1471
Westgare, W. A., 617
West Virginia, 449
van de Weyen, R., 1494
Wharton, M. F., 1385
Whelan, L. A., 282, 1199, 1486
Whitacre, J., 740
Whitaker, T. W., 1060
White, H. L., 1027, 1077
Whiteland, E. W., 1478
White-Stevens, R. H., 823
Whitney, L. D., 250
Whyte, R. O., 1543
Wiant, J. S., 1517
Wickens, G. W., 43
Widdowson, E. M., 769
Widmer, A., 744, 745, 746, 749
Wiehe, P. O., 306
Wiese, E., 828
Wiesmann, R., 547, 554
Wigg, L. G. T., 695

Wight, W., 252
Wight, W. F., 853
Wilbaux, R., 1472, 1537, 1538
Wilcox, L. V., 837
Williams, C. H. B., 1435
Williams, P. H., 1027
Williams, W. O., 940
Willis, J. C., 23
Willison, R. S., 126
Wills, J. M., 291, 653
Wilshaw, R. G. H., 1497
Wilson, R. D., 175
Wilson, W. F., Jr., 439
Winklepleck, R. L., 873
Winckler, A. J., 940
Winston, J. R., 1120, 1232
Winter, E. J., 1443
Winter, J. D., 1229, 1230, 1337
Wishart, J., 451 1337
Wishart, J., 451
Wissing, P., 315, 381, (383)
Woglum, R. S., 1131
Wolcot, G. N., 1504
Wong, C. Y., (821), (1136)
Wood, J., 186
Wood, M., 1368
Woodhead, C. E., 487
Woodman, R. M., 142, 152
Woods, J. J., 603
Wooldridge, A. J., 1374
Worlock, R. F., 854
Wormald, H., (952), 985, 1224, 1363
Worsley, R. R. Le G., 311, 1012
Worthley, H. N., 121, (1378) Worthley, H. N., 121, (1378) Wright, L. E., 467 van Wyk, G. F., 1234 van Wyk, S. P., 1305

Yalta, Nikita State Botanical Gardens, 671, 771 Yamashita, Y., 56 Yap, F., (1510) Yarnell, S. H., 740 Yaroslavtseva, N. F., 614 Yaroslavtseva, N. F., 614 Yates, F., (1304) Yeager, A. F., (921) Yerkes, G. E., 867 Yetter, W. P., 1002 Youden, W. J., 806, 1029 Young, H. Y., 304, 305, (718) Young, R. E., 1050 Yu, T. F., 524

Zagorodny, G. P., 1096 Zakharova, E. I., 463, 517 Zanzibar, (1589) Zarubin, A. F., 946 Zilva, S. S., 377, 390 Zimmerman, P. W., 796, 797 Zito, F., 945 Zohary, M., (226) Zozulya, V. S., 380 Zubov, M. F., 570

Horticultural Abstracts, Vol. X

the article has been noted only and not Abaca, vascular disease, 680 of immature apples, 73, 499, 500 of orange fruits, 644 Acer platanoides as rubber plant, 1490 Acetylenefor colouring citrus, 730 for ripening pears, 392 Achaea obvia, 1422 Actinidia fruit-bearing climbers, 507 Adansonia digitata, 247 Agave-see also Sisalcantala, leaf morphology, 1434 Agricultural testament, an, 1259 Agricultureand forestry notes, 791 Agrume, origin of word, 189 Albizzia julibrissin, disease of, 625 Alcohol from oranges, 395 Aleurocanthus woglumi, (648) Algae, growth substance in marine, 456 Algemeen Landbouw Syndicaat, A.R. for 1939, cultivation, 949 fruit growth, (950) hardiness, 671 Italian varieties, 90 pests, 1263 pollination, 492 rootstocks, 486 in Spain, 949 Alnarp State Experiment Station for Vegetables, A.R. for 1938, 1552 Alocasia spp. edible, in Ceylon, 249 Alternaria-Citri, 644 Passiflorae, 655, 1364 Amherstia nobilis, 1583 Amorphophallus oncophyllus, 1197, 1541 Ampelography, 931 Amygdalus Petunnikowii, 489 Anabasine, 171 Anagyrus coccidivorus, 1509 Analysisash, 1285, 1286 of mineral elements in plants, 464 of potassium in solutions and extracts, 465 statistical, (850) Ananas-see also Pineappleecology, 1211 Ancylis spp., 562

N.B.—Brackets round a number signify that

Andropogon muricatus, 1472 Anguillulinadipsaci on rhubarb, (1086) pratensis on tea, 687 Annona spp., insecticidal properties, 1160 Annual report—see also Yearbook— Algemeen Landbouw Syndicaat for 1939, Alnarp State Experiment Station for Vegetables for 1938, 1552 Antigua Dep. Agric. for 1938, (450) Arizona agric. Exp. Stat. for 1938-9, 1589 Arkansas agric. Exp. Stat. for 1938-9, 1553 Assam Dep. Agric. for 1938-9, 1554 Basutoland Dep. Agric. for 1938-9, 1555 Besoekisch Proefst. Rubber, Koffie, Tabak for 1938-9 (Tobacco), 1570 B. Guiana Dep. Agric. divis. Reps. for 1938, B. Guiana Rep. Dir. Agric. for 1938, (450) B. Honduras Dep. Agric. for 1939, 1556 Burma Dep. Agric. agric. Stats. for 1938-9, Burma Dep. Agric. Operations for 1938-9, C.S.I.R. Aust. for 1938-9, 1270 Canada, Minist. Agric. for 1938-9, 1561 Canada, nat. Res. Coun. for 1937-8, 432 Canada, nat. Res. Coun. for 1938-9, 780 Carnegie Institution, Washington, Div-Plant Biol. for 1938-9, 1562 Ceylon, Coconut Res. Scheme for 1939, 1563 Ceylon, Dir. Agric. Administ. Rep. for 1938, part IV, 1564 Colorado agric. Exp. Stat. for 1938-9, (1589) Cyprus Dep. Agric. for 1938, 433 Delaware agric. Exp. Stat. for 1938-9, 774 Development Commissioners, Lond. for 1938-9, 1568 Dominica Dep. Agric. for 1938, (450) Dominica Dep. Agric. for 1939, (1589) Edinburgh and East of Scotland agric. Coll. for 1938-9, 775 Eire Minist. Agric. for 1938-9, (450) Grenada Dep. Agric. for 1938, (450) Hawaii agric. Exp. Stat. for 1939, 776 Illinois agric. Exp. Stat. for 1936-7, 777 imp. Coll. Trop. Agric., Trinidad, for 1938-9, 1584 imp. Coun. agric. Res. India for 1939-40, 1572 Indian Tea Ass. sci. Rep. for 1938, 435 Inst. nat. Étude agron. Congo belge (I.N.E.A.C.) for 1938, 436 Iowa agric. Exp. Stat. for 1938-9, 1574 Jamaica Dep. Ágric. for 1938, 1575 John Innes Inst. for 1938, 437 John Innes Inst. for 1939, 1576

Trans Day Assis for 1000 400	19111103 (00111111111111111111111111111111
Kenya Dep. Agric. for 1938, 438	strawberry, 124, 992
Lange Ossekampen for 1938, 1577	as virus vectors, (1086), 1361
Madras Dep. Agric. Operations 1938-9, 778	woolly, 554, 869, 870
Madras Dep. Agric. sub. Officers for 1938-9,	Aplanobacter michiganense, 605
(779)	Apple(s)—
Malaya Dep. Agric. for 1938, 440	abscission of fruit, premature, 73, 499, 500
Mauritius Dep. Agric. for 1938, (1589)	angular leaf spot, 985
Mazoe Citrus Exp. Stat. for 1937, 773	anthrachose, 108
nat. Inst. agric. Bot. Cambridge for 1938-9,	aphid control, (1378)
(1589)	aphis, woolly, 554, 869, 870
Nebraska agric. Exp. Stat. for 1939, (1589)	ascorbic acid in, 314, 390
New Zealand Dep. Agric. for 1938-9, 443	Australian, picking and storing, 727
New Zealand Dep. Agric, for 1939-40, 1578	biennial bearing, 885, 886
New Zealand Dep. Agric. for 1939-40, 1578 New Zealand D.S.I.R. for 1938-9, 445	bitter pit, 97, 956, 957
New Zealand D.S.I.R. for 1990-9, 449	
New Zealand D.S.I.R. for 1939-40, 1579	black spot, see scab
Nigeria Dep. Agric. for 1938, 782	blue mould, (1240)
Nova Scotia Fruitgrs' Ass. for 1939, 1580	boron affecting fruit, 467, 471, 472, 531,
Palestine Dep. Agric, for 1938-9, part I, 1581	955, 958
Pennsylvania agric. Exp. Stat. for 1938-9,	boron status of N. Zealand, 1353
447	breeding, 858
Queensland Acclimatisation Soc. for 1938-9,	bud differentiation, 887
785	by-products, 764
Queensland Acclimatisation Soc. for 1939-	canker, perennial, 108
40, 1582	canned, vitamin C in, 390
Queensland Dep. Agric. for 1938-9, 784	cider, 857, 914; see also Cider
roy. Swedish Acad. Agric. for 1939, 786	codlin moth, 121; see also Codlin moth
Res. Stat. Rubber, Coffee and Tobacco, D.E.I. (tobacco), for 1938-9, 1570	colour, 917-19
D.E.I. (tobacco) for 1938-9, 1570	colouring, sun, 1333
Rubber Res. Bd, Ceylon, for 1938, (450)	compatibility, see rootstocks
Rubber Res. Bd, Ceylon, for 1939, 1565	Coniothecium chromatosporum, 111
Rubber Res. Inst., Malaya, for 1938, 441	cork in, 467, 471, 472, 955, 958, 959
Seychelles Dep. Agric. for 1938, (450)	cover crops, 1325
S. Africa Dep. Agric. for 1938-9, 448	crab stocks, clonal, 1315, 1316
S. Australia Minist, Agric, for 1938-9, 787	crown gall, 537
St. Vincent Dep. Agric. for 1938, 788	dieback, 531
sugar cane investigations, Trinidad, for	disease control in S. Rhodesia, 951
1939, (450)	double working, 55
Tanganyika Dep. Agric. for 1938, (450)	dwarf trees, 868
Tea Res. Inst. Ceylon for 1939, 1567	emanations of volatile substances from, 321,
Texas agric. Exp. Stat. for 1938, (1589)	728, 1225
Toklai exp. Stat. for 1938, 435	English varieties, 46, 479
Trinidad and Tobago Dep. Agric. for 1938,	ethylene vapour from, 728, 1225
1583	fertilizers and manures, 70, 896-8, (921),
Uganda Dep. Agric. for 1938, part I, (450)	1325, 1327
Uganda Dep. Agric. for 1938-9, part II, 1585	fireblight, (1378)
Vegetable Res. Stat. Norway for 1937-8, 446	flooding produces cork, 959
Vineland hort exp. Stat. for 1938-9, 1586	flower bud, 887
Waite agric. Res. Inst. for 1937-8, (1589)	flowering dates, 495
Zanzibar Dep. Agric. for 1939, (1589)	frame-builders, hardy, 1561
iona, see Annona	free seedling stocks, clonal, 1315, 1316
at, control of the garden, Tapinoma simrothi, 564	frost hardiness, 964, 971
thracnose—	frost injury, 93
apple, 108	fruit—
mango, 290	calyx end structure in Gravenstein, 498
vine, (546)	colour, 917-19
itigua Dep. Agric., A. R. for 1938, (450)	drop, 73, 499, 500
itirrhinum rust, 178	fungal invasion, resistance to, 326
ıuraphis—	histological structure, 1321
crataegi, 990	nitrogen metabolism, 319, 322
roseus, (1378)	waxing, 1516
phelinus mali, 554	X-ray examination, 732
ohides—	fungal invasion of fruit, 326
fruit tree, (555)	gas storage, 323, 1221, 1222
market garden crop, (598)	girth as indication of productivity, (921)
red leaf, 990	grafts, early growth, 1313
rosy, (1378)	grafting wax, 861
Rubus, 553, 1361	Gravenstein, calyx end structure, 498
., ,	, , , , , , , , , , , , , , , , , , , ,

Apple(s) (continued)—	Apple(s) (continued)—
growing in New York, 51	Wisley Trials, 46, 479
hairy root, non-infectious, 1312	woolly aphis, 554
hardiness, 964, 971	woolly sphis immune rootstocks, 869, 870
juice, 387, 388, 750, 751, 754, 1248, 1579	X-ray examination, 732
layers, root forming ability, 859	Apricot(s)—
leaf photosynthesis, 66, 893	deficiency diseases, 958
little leaf, 1355	fruit composition, 754
magnesium deficiency, 960, 962, 1352	growing in France, 49
maturity important in cider making, 914	leaf analysis, 671
mealybug on, (1378)	pollen longevity, 881
metabolism, 319, 322	root growth, 490, 875
Monostira unicostata pest of, 549	rootstocks, 49, 486
in Morocco, 44	thinning, 912
mouldy core, X-ray examination for, 732	Arctic, vegetables in, 134, (850)
mulching, 1325	Areca rubra, 1195
packing, 727, 1241	Argyroploce urticana, 990
pests, 121; see also particular pests	Arizona agric. Exp. Stat. A. R. for 1938-9, (1589)
photosynthesis, 66, 893	Arkansas agric. Exp. Stat. A. R. for 1938-9, 1553
physiological disorders, histology of, 954	Armillaria mellea in tea plantations, 1176
picking time, 727, 914	Aroids, edible, in Malaya, 721
as pig feed, 764	Arsenical powder injury to bees, 571
pistol case bearer, 121	Arsenicals, sprays, damage, etc., 571, 573, 1018
pollen longevity, 881	1019, (1378)
pollination, 58, 492, 495, 879-81	Arsenical sprays, substitutes for, (1378)
pruning, 67, 907, 908, 1328, 1330	Artichoke, the Jerusalem, (1086), 1099, (1400)
respiration, 320; see also storage	(1588)
Rhizopus arrhizus causes rot in, 112	Artificial—
ripeness affects cider, 914	colouring, 729, 730
root anatomy, 61	light, use and effect of, 604, 843
root growth, 61, 859, 874	ripening, 329, 333, 334, 392, 730
root rot, 541	Artocarpus—
rootstocks, 55, 74, 449, 485-7, 770, 865,	champeden, 704
867-70, 1270, 1314-18, 1554, 1574	communis, 705
rootstock(s)—	Ascorbic acid, see Vitamin C
carbohydrate relations on different, 1317	Asparagus—
seasonal absorption in water culture, 74	cultivation, 423
rose leaf beetle on, 1368	frozen pack preservation, 1239
rosette, 1355	male and female plant differentiation, 1383
rot due to Rhizopus arrhizus, 112	planting depth, 1050
scab, 109, 110, 539, 731, 980-4, 1224	rust, 1051
Sclerotinia mali on, 542	spacing and yield, 1384
seedlings, 485	stalk growth, temperature and, 147
shoot anatomy, 61	storage, 1239
soft rot, 540	Assam—
soft scald, 1222	Dep. Agric. A. R. for 1938-9, 1554
soil management, 1325	report on tea culture in 1938, (1589)
spray—	Atriplex hortense, 594
effects, 572, 1017	Australia, possibilities of monsoonal, 228
residues, 573, 1018	Auvergne, vine growing in, (950)
sulphur, 1013	Auxins—see also Growth substances—
summer oil, 999	in marine plants, 456, 1277
stem black disease, 111	production by roots in vitro, 814
storage, 70, 318-26, (351), 727, 728, 1221-5,	in seedlings—
1516	distribution, (460)
storage diseases, 318, 324-6, 1224	increased by naphthalene acetic acid, 128
superficial scald, 318, 1223	soil micro-organisms produce, 8
surplus, utilization, 764	Avena coleoptiles, (460), (821), (1284)
topworking, 68, 69, (921)	Avocado
transplanting, 1324	Ass. Calif. Yearbook for 1939, 1558
tree borer, round-headed, 1367	bench grafting, 1153
varieties, 46, 479	bibliography, 413 cultivation, 1152
virus in Manchukuo, 100	cultivation, 1152
vitamins, 314, 390	decline, 1154
volatile products from stored, 321, 728, 1225	pests, 1263
water core, 532	propagation, 1153
in water culture, 74	scab, 1155
wax applications to, 1516	scale, 1156

Avocado (continued)—	Bibliography (ies)—
soil medium for seedling, 1204	avocado, 413
in S. Africa, 1152	boron, 35
Azalea, growth substances for propagation, 1107	food investigations, 1271
	at Science Library, Lond., 429
	virus diseases, (1378)
Bacillus amylovorus, (1378)	Biennial bearing—
Bacterial—	in apple, 885, 886
canker of stone fruit, 977	cultivation and pruning affect, 886
control of pests, 565	Bilberry— acid tolerance, 511
Bacterioses, work of Inst. Plant Prot., Leningrad,	cuttings, 449, 1341
(1587) Bacterium—	inheritance in, (950)
campestre on stocks, 175	nutrition, (950)
Syringae on lemon, 640	pollination, 512, (950)
tumefaciens, see Crown gall	pruning, (950)
Bagging—	Biochemistry of leguminous and forage crops, (158
the Japanese pear, 60, 882	Biological control—
versus pollination in bud, 878	bacterial, of pests, 565
Bahamas, agriculture in the, 672	fungal, of scale, 647
Banana—	of fruit fly, 1373
anthracnose, 1210	Bios group of growth substances, 1275
black end, 1210, 1519	Bitter pit, 97, 956, 957 Blackberry—
bunch covers, 717 bunchy top disease, 716	the Brainerd, (950)
in Cameroons, 1505	absence of tartaric acid in, 393
Cercospora leaf spot, 301	as a weed, 1377
dietetics, 1507	Black currant—
ethylene production and consumption by,	composition, 754
370	cultivation, 926
fruit metabolism, 367-9	cuttings, 925
the Giuba, 1506	×gooseberry hybrids, 927
Gros Michel storage, 369	juice, 1249
in Italian Somaliland, 1506	magnesium deficiency, 1352 propagation from cuttings, 925
Lady Finger packing, 743	unfruitfulness, 1340
leaf spot, 301 manuring, 1209	Blackthorn × Prunus domestica hybrids, 1309
packing, 743	Boehmeria nivea, 218
planting, 299	Boga medeola as cover crop for tea, 435
respiration, 1236	Books and reports, see end of each number
root distribution, 300	Bordeaux mixture, see Sprays, bordeaux
storage, 367-70, 1236-8, 1519	Boron—
storm damage repair, 715	in agriculture, 467-72, 835, 836
thrips, 717	and apple dieback, 531
Baobab, 247	bibliography, 35
Bassus diversus, 1002	and bitter pit in apples, 956, 957 content of vegetables, fruits and nuts, 12
Basutoland Dep. Agric. A. R. for 1938-9, 1555	and cork in apples, 467, 471, 472, 531, 958
Batum botanical gardens, oranges in, 195	deficiency, 467, 468, 471, 472, 531, 83
Bean—	955, 958, 1047, 1351, 1354
broad, leaf injection, 1391	deficiency affects carrot growth, 1047
chocolate spot disease, 164, (165)	deficiency, sunflower as indicator of, 1354
daylight reduction affects growth, 1077 long, 723	excess, 468
rust, 164	German experience with, 471
Bee(s)—	and growth substances, interrelation, 817
arsenical powder injury, 571	in horticulture, 836 Italian studies, 469
on coffee estates, 691	literature, 35
keeping, 59, (1335)	as nutrient affects calcium in ash, 1080
non-injurious to fruit, 547	in soils, behaviour, 837
Beetles, strawberry, 558	status of N. Zealand apples, 1355
Beetroot—	and sugar beet heart rot, 838
Dutch work in 1938, (1086)	Botany in the tropics, economic, 227
vernalization, 461	Botrytis—
Behaviour of plants, 22	cinerea on grapes, 117-18, 345, 346
Bertholletia excelsa, 294	Fabae, 164, (165)
Besoekisch Proefst. Rubb. Koff. Tabak, A. R. for	narcissicola, 1113
1938-9, 1570	' vulgaris on vines, 119

Boysenberry in Michigan, (516)	Cacao (continued)
Bracken control, 1006, 1376, 1377	incompatibility, 1459, 1461
Bramble shoot webber, 994	leaf flush and mineral intake by shoot, 1460 manuring, 1188, 1463
Brassica(e)—	Marasmius perniciosus disease, 1191
cultivation, 1052 heteroauxin and meristem growth, 1281	in Nigeria, 1457
oil plants, fungi of, (615)	pod maturation rate, 1469
Brazil nut, 294	pollination, 440, 1459-62
Breadfruit, 705	processing, 1500-3
Breeding—	propagation costs, 1458
apple, 858	regeneration, 693, 1470, 1471
flowers, 1576	Sahlbergella blast, 1189
deciduous fruits for frost resistance, 858	selection, 1457
fruiting of seedlings accelerated in, 1310	self-incompatibility, 1185, 1459, 1461
onions, 143	swollen shoot, 1190
sweet potato, (670)	transpiration, 1467
vegetables, 129	at Trinidad, 1583
vines, 520, 932, 933, (950), 1344	vegetative propagation, 1186, 1187
Bremia Lactucae, 588	witches' broom resistance, 1191
British Guiana—	Cacoecia argyrospila, 1372
Div. Reps. Dep. Agric. for 1938, (792)	Caddis fly pest of watercress, 1059
administ. Rep. Dir. Agric. for 1938, (450)	Calcium— affects fruit firmness, 1071
British Honduras Dep. Agric, A. R. for 1939, 1556	influences organic acid content, 834
British Somaliland, vet. agric. Dep. A. R. for 1938-9, (450)	California Avocado Ass., Yearbook for 1939, 155
Broccoli storage, 375, 1520	Calomel as insecticide, 989, 1053
Broom fibre industry, 1103	Camphor, 222, 226
Brown rot disease, hosts of, 1363	Can, see Canning
Bud—	Canada—
inhibition by indole-3-acetic acid, 804	Dep. Agric. list of publications 1939, (431)
low temperature effect on, 1359	Dep. Agric. list of publications 1940, (1587)
Buitenzorg agric. Exp. Stat., list of publications,	Dominion experimental farms, 414
(1214)	Illustration Stations, Progr. Rep. Part II—
Bukalasa exp. Stat., results at, 1180	1934-8, 1559
Bulb(s)—	nat. Res. Coun. A. R. for 1937-8, 432
composition of flowering, 183	nat. Res. Coun. A. R. for 1938-9, 780
diseases, 427	nat. Res. Coun. publications, 431
eelworm, 187	Substations, results of experiments o
experiments at Kirton, 180-6 hot water treatment, 186, 187, 1404	Experimental, 1931-8, 1560 Cananga oil from Canangium odoratum, 268
Burma—	Canned—
crops, market surveys, (313)	apple, vitamin C in stored, 390
Dep. Agric. Operations A. R. for 1938-9,	fruit, drained weight of, 1525
1557	fruits, firmness induced by calcium chloride
Dep. Agric. Rep. agric. Stats. for 1938-9,	1254
(450)	fruits, production, 419
Markets Section bulletins, (313)	fruit, sulphur traces in, 1527
Burnihat citrus research station, 1554	vegetables, hydrogen-ion concentration
Byssochlamys fulva in processed fruit, 1253	1529
	Canneries, domestic, in Canada, 753
Cabbana	Canning—
Cabbage—	apple juice, 387
manuring in rotation, 1381 pot experiments in tropics, 148	cans— composition of, 756
root fly, 1053	heat penetration in rotating, (1542)
storage, 374, 1521	hydrogen swells studies, 1526
Cacao—	peach, 391
bean, purple colouring in, 1468	pineapple, 1530
carbon assimilation, 1467	Capetown precooling store, 382
cherelle wilt, 1464	. Caper—
cultivation on loam soils, 1184	for reclaiming steppes, 616
cuttings, 1186, 1187, 1458	spurge, resins in, 1100
dieback, 1189	Capitophorus fragariae, 124
fermentation, 1500-3	Capnodis, stocks resistant and susceptible to
fruit setting, 267	486
growth rate and mineral intake by pod, 1465	Capparis spinosa for land reclamation, 616
in Guatemala, 266	Capsicum annuum, field plot technique, 271
Helopeltis control, 1192	Capsicum, capricine determination, (226)

Carbohydrate(s)—	Cherry (continued)—
in plants, determination, 1289	deficiency diseases, 958
relations of grafted apple trees, 1317	dieback, 96, 534
Carbon—	fertilizers and manures, 71
from cherry stones and walnut shells, 759	fruits affected by sprays, (1020)
dioxide	fruit fly, (1378)
as growth stimulant for cuttings, 18	fruiting affected by nitrogenous manuring,
pressure, juice storage under, 386	71
Cardamam successil 970	maturity standards, 916
Cardamom weevil, 270	
Carica papaya, see Papaw	pests of sweet, 1263
Carnation(s)—	pollination, 492, 496, 497, 881
storage of cut, 179	rootstocks, 865, 871, 872, 1307, 1553
Verticillium wilt, 1027	Sclerotinia rots of, 542
Carnegie Institution, Div. Plant Biol., A. R. for	sports, 53, 54
1937-8, 1562	stones, gas and carbon derived from, 759
Carotene in palm oil, 1538	storage, gas, 1228
Carpocapsa pomonella, 121, 996-1000, 1018, 1270,	Cheshunt—
(1378)	experimental results of 1939, 1026
Carposina adreptella, 445	diseases in 1939, 1027
Carrot—	pests in 1939, 1028
anatomy affected by boron deficiency, 1047	Chestnut-
deficiency symptoms, 142	Chinese water, 678
respiration and fermentation in, (1086)	sweet—
storage, 379	Coryneum disease, 114
Carthamis tinctorius, 219	in Italy, 88
Cashew nut liquid, processing, (1542)	male sterility, (950)
Cassava—	pollination of Japanese, 948
bud sports, 248	varieties, (950)
cultivation, 440, 1169, 1439	Chico storage, 1238
fertilizers, 1438	Chicory—
root studies, 1437	
starch fermentation, 1542	forcing, 155
storage, 1235	strains of coffee, 595
in Zanzibar, 1169	Children discourse in Kinney 524
Castor oil plant—	China, crop diseases in Kiangsu, 524
cultivation and use, 1196	Chlorophyll accumulation, (847)
ecological classification, 226	Chloropicrin as soil fumigant, 1064
nutrient accumulation in, 1101	Chlorosis—
Cauliflower—	in citrus, infectious, 642
magnesium deficiency, 1054	of vine, 533
in Philippines, 722	Chronica Botanica, 1550
storage, 1520	Chrysanthemum—
Celery fertilizers, 592, 1058	culture in wire pots, 620
Ceratitis capitata, 990	eelworm, 177
Cercopis sanguinea, 985	flowering time affected by radiation, 1111
Cercospora—	heat treatment, 177
Musae, 301	pests, 176, (1114)
Nicotianae, 251	wilt, 1027
Ceylon—	Chrysomphalus aonidum, (648)
Dir. Agric. administ. Rep. for 1938, part IV,	Chrysophyllum Cainito, vegetative propagation,
1564	707
journal of science, catalogue of contents,	Cider—
430	apple production, 857
Rubb. Res. Bd report of work for 1938,	checked fermentation, 1246
(450)	makers' calendar, 857
Rubb. Res. Bd report of work for 1939,	preservation with CO ₂ , (1258)
1565	ripeness in apples affects, 914
	Cincturing, see Ringing
Tea Res. Inst. A. R. for 1939, 1567	Cinchona—
Tea Res. Inst., index to publications, 1566 Chamber, temperature control, 27	
Then ging the neture of plants by cultural means	bark industry, the world's, 275
Changing the nature of plants by cultural means,	cultivation, 697
1379	fertilizers, 1474
Charcoal from coconut shell, 1256	propagation, 698, 699
Cherry—	Cinema, survey of films on agricultural subjects,
brown rot in morello, 494	477
composition, 754	Circumeter, a fruit, 915
cracking of fruits, 953	Citrus and sub-tropicals, 189-226, 626-71, 1115-58,
culture, 1307	1406-27

Ci

trus—	Citrus (continuea)—
age of South African trees, 1408	rootstocks, 632, 1115, 1270, 1410-12, 1571
in Algeria, 629	rust mite, 1132
Alternaria rot, 644	scab, 1129
	scales, 646, 647, (648)
areolate leaf spot, 641	
black fly, (648)	seed viability, 191
black spot, 207	sooty blotch, 643
boxes, 352, 1242	storage, 352-63
budding, 190	tasting, 633
by-products, 394, 395	thrips, 1133
on Caspian coast, 1117	trees, packing and lifting, 1134 in U.S.A., 628
	in II S A 628
chlorosis, 193	in II S S P 690
chlorosis, infectious, 642	in U.S.S.R., 629
colouring—	wastage, 362, 363, 645
by acetylene, 730	waterspot, 198, 1417
by ethylene, 729	wrappers for, 362, 363, 1234
copper deficiency, 575, 1341	zinc deficiencies, 192
cover crops, 1123, 1124	Cladosporium fulvum, 163, 606, 1074
	Clasterosporium carpophilum, 544
cuttings, 1118	
diseases, 1420	Clivinia rugithorax, a strawberry pest, 557
exanthema, 1128	Clostridianum pasteurianum in canned pineapple
fetola disease, 206, 1419	1530
frost protection, 204, 205, 638	Cloth houses for floriculture, 173, 1106
frost resistance—	Clove—
	anatomy, 694
affected by growth processes, 1414	
affected by light intensity, 1416	nursery production, 695
induced by exposing to low temperatures,	Cobnuts in Italy, 89
1415	Coconut—
fruit(s)	bronze leaf wilt, 710
composition, (208)	diseases connected with soil conditions, 710
	1510
dipping for control of fungi, 355, 360	
drop, 1119	dwarf, 1499
emanations from, 1232, 1233	explosive used in cultivation, 711
piercing moths, 1422	husks, use in cultivation, 712
set, soil moisture and, 1119	in Jamaica, 710
volatile products, (1240)	leaf miner, 297
gall wasp, biological control, 650	manuring, 1500
in the Cald Canal 1407	nut fall, premature, 296
in the Gold Coast, 1407	
green manuring, 637	oil compared with whale oil, 760
growth—	oil preparation, 401
affected by pH, 1413	rat trap, 713
in budded trees and those from cuttings,	Res. Scheme Ceylon, A. R. for 1939, 1563
1118	rhinoceros beetle, biological and other
	control, 298
iron deficiency, 193	
irrigation, 203	shells, dry distillation, 400
juices, 389	shell used for charcoal, 1256
at Kodur, nursery technique, 190	soil conditions and nut fall, 296
longevity, 1408	soils and disease, 710, 1501
manganese deficiency, 192, 636, 1122	tree hopper, 1502
	water as coagulant for latex, 406
manuring, 201, 202, 635, 1121, 1127	water as coagulate for latex, 400
melanose, 1128	weed control, 1503
nematode, 649	Coco-yam, 249
nitrogen assimilation, (1136)	Codlin moth, 121, 996-1000, 1018, 1270, (1378)
origin of word agrume, 189	Coffea arabica, 1453, 1585
	Coffee
packing, 352, 1242	
in Palestine, 626	Arabica and Bourbon varieties, comparison
Penicillium infection, 361, 1231, 1232	1448
in Poedjon district, Java, (1423)	bee flora, 691
pests, 1263, (1423)	berry preparation for market, (765)
pests in Leeward and Windward Islands,	branch grafting, 1452
	Bukalasa experiments, 1180
report on, (1423)	
pH affects growth, 1413	in Colombia, 1178
plant protection in São Paulo, (1136)	in Costa Rica, 1178, 1448
planting and maintenance, (1136)	curing, 403
pollination, (1136)	cuttings, 261, 690, 1451
production, world, 630	cytology, 689
research at Burnihat, Assam, 1554	grafting, 1452
rind colour, 1120	green manuring, 262

Coffee	(continued)—	Cooling of fruit in store, 315
	growth and solar radiation, 1454	Copper
	growth substances for rooting, 438, 1179,	deficiency, 33, 1351
	1451	resinate for treating paper pots, 1034
	growth and yield relationships, 265	Copra—
	in Jamaica, 1178	deterioration, 399
	in Kenya, Scott Laboratories, 1179	driers and drying, 397, 1539, 1540
	1002	Ephestia cautella infestation, 398
	crop ratio, 258 disease, 1571	Cordeauria edulis, 1166 Cork—
	function, 259	diseases, 467, 471, 472, 955, 958, 959
	liquoring terms, 404	oak, 856
	manuring, 440	Corticium—
	mealybug, 438, 1182	areolatum, 641
	Napier grass as cover for, 262	galactinum, 541
	processing, biochemical reactions during,	Coulure in vines, 1357
	1537	Court-noué disease of vines, 103-6
	pruning, 692, 1181, 1455	Covent Garden store, (383)
	in Puerto Rico, 1449	Cover crop(s)—
	quality, 403	Boga medeola as, 435
	rainfall and yields, 264	for citrus, 1123, 1124
	robusta, 1585	for deciduous fruits, 1325
	root growth in arabica, 1453 rubber as shade for, 688	for peaches, 904
	Scott agric. Labs., investigations, 1179	for rubber, 284
	seed storage, 263	Cowpea as green manure, (1335) Cracking of fruits, 953
	shading, 688, 1180, 1456, 1585	Crinkle disease of strawberry, 974
	thrips, 1183	Crown gall—
	tree excavation, 1319	and its agent, 538
	in Uganda, 1180, 1585	in apple, 537
	vegetative propagation, 260, 261, 1450, 1451	biological control, 107
	yield—	in peach, 978
	growth and, 265	in pome fruits, 107
011	rainfall and, 264	C.S.I.R. Aust., A. R. for 1938-9, 1270
	icine for polyploid production, 458, 1112	Cucumber—
Collect	phora pests, 121, 995 ptrichum—	acetate films instead of glass for forcing, 1063
	gloeosporioides—	light effect on, 599
	on mango, 290	manuring, 1381 root rot, 1027
	on tropical fruits, 714	seed treatment, 597
	Spinaciae, 593	storage, 740
Coloca	isia—	transpiration, 1061
	esculenta—	vernalization, 1062
	in Hawaii, 250	Cucurbits, disease incidence, water table affects,
	in Malaya, 721	156
	spp. edible in Ceylon, 249	Cultivated plants, origin of, (1304)
	ado agric. Exp. Stat. A. R. for 1938-9, (1589)	Cuprous oxide as seed protectant, 1084
Colou	r variation, genetics and chemistry of flower, (1114)	Currants, black, see Black currants
Colour		Currant(s) growing in Missouri, 1339
	in apples, 917-19	red, classification, 510
	apples after picking, 917, 1333	Cuscus grass, 1472
	citrus artificially, 729, 730	Cuttings-
Comm	ercial flower forcing, 1260	cacao, 1458
	osition of foods, 769	chemical treatment, see Growth substances
	ost making methods—	coffee, 261, 690
	an agricultural testament, 1259	leaf bud, 1161
	hot fermentation, (921)	light and temperature response differs from
	for rubber, 283 in S. Africa, 1295	that of seedlings, 1108
	in S. Rhodesia, 665	rooting affected by colour of protective
	various, 234	glass, 1179 of tropical shrubs, leaf bud, 1161
	ost manure for tea, 1444	Cydia molesta, 1001, 1002, 1270
	ntrates in juice and wine making, 746, 747	Cydia pomonella, see Codlin moth
	hecium chromatosporum on apple, 111	Cymbopogon spp., 310, 311
	hyrium prunicolum, 543	Cyprus—
	ia exitiosa, (563)	Dep. Agric. A. R. for 1938, 433
Conto	ur planting, 901, (1304), 1323	soil and water conservation, 40

Daffodil forcing, 1401, 1402	Diseases (continued)—
Damping off in peas, 1084	root, in agriculture, 525
Datana integerrima, 1371	in Southern Rhodesia, 651
Date palm—	in Ukraine, list of fungal, 979
fruit ripening, 1148	virus, 100-3, 105, 106, 123, 535, 536, 621, 686, 972-6, 1027, 1083, (1086), 1088, 1169, 1190, 1207, 1361, (1378), (1400),
mycorrhizal habit, 1149	080, 972-0, 1027, 1083, (1080), 1088,
pests, 1263	1109, 1190, 1207, 1301, (1378), (1400),
storage, 737	(1587)
Day length affecting crop growth, 29, 30, 305, 604,	Ditylenchus dipsaci on bulbs, 1048
(847), 1056, 1077, 1108, 1111, 1126,	Dizygomyza cepae, 1382
1171	Docynia indica as apple rootstock, 1554 Dominica—
Debtors in D. E. Indies, relief of, 1159	citrus rootstocks in, 1115
Deer control in rubber plantations, 1488	Dep. Agric. Rep. for 1938, (450)
Deficiency(ies)— diagnosis, see Injection	Dep. Agric. Rep. for 1939, (1589)
symptoms—	Dominion exp. farms, Canada, 414
calcium and magnesium, 142	Dormancy, breaking bud, 890
magnesium, 960-2, 1054, 1352	Double working—
manganese in citrus, 192, 636	apple, 55
manganese in pea, 1397	pear, 862
minor elements, 1351	Dried fruit, production figures, 419
nitrogen, phosphate and potash, 142,	Drought resistance in deciduous fruits, 671, 963
Defoliation of peach affects fruit growth, 1331	Drying, see Dehydration
Dehydration—	Durian propagation, 440
of fruits, 392, 761, 1531	Dwarfing, physiology of, 1317
of vegetables, 761, 1531	
Delaware agric. Exp. Stat. A. R. for 1938-9, 774	East Malling hop research, 168
Delia brassicae, 1053	Ecological differentiation of fruit trees, 480
Delphinium culture and diseases, (188)	Ecology, how plants have found their homes, 23
Derris—	Edinburgh and E. Scotland agric, Coll. A. R. for
clonal types, 242	1938-9, 775
in Malaya, prospects for, 1432	Eelworm—
manuring, 241	bulb, 186, 187
rotenone content, 243	chrysanthemum, 177
selection, 676	onion, 1048
toxicities of different species, 240, 1011	Eggplant grafting on nightshade, 159
Development Commissioners, London, A. R. for	Egypt, olive and its products in, 210
1938-9, 1568	Eichhornia speciosa, 576
Dextrine from potato, 586	Eire Minist. Agric. A. R. for 1938-9, (450)
Diachasmoides spp. parasitic on fruit flies, 1373	Elacis guineensis—
Diarthronomyia sp., 176, (1114)	in Sumatra, 295 utilization, 396
Dictionary of scientific terms, 408	Elements, minor, deficiency symptoms, 1351
Didymella Lycopersici, 607 Dieback, physiological, of plums and cherries, 534	Eleocharis tuberosa, 678
Dietetics—	Elsinoe—
affected by manuring, 1294	ampelina, (546)
of fruit and fruit products, 1216	Citri, 1129
Digitalis lanata and D. purpurea, 1095	veneta, 986
Dinitrophenol compounds to break dormancy,	Emanations—
890	from fruit, 321, 728, 1225, 1232
Dioscorea—	from fungi affect stored fruit, 1518
in the East, account of genus, 1549	Empire products, research on, 384
yams, 1170	Empoasca fabae on citrus, 1131
Diplocarpon earliana, 113	Entomosporium maculatum on pear, (128)
Diseases—	Ephestia cautella in copra, 398
in Belgian Congo, 1433	Epigastigmus brevivalvus, 650
control—	Eriosoma lanigerum, 554, 869, 870
in gardens and small orchards, 125	Erosion, soil—
in war time, 1374	in Basutoland, 1555
in Denmark 1938, 99	in Cyprus, 40
noted by East Malling 1939, (952)	humus and, 826
in Kiangsu, China, 524	in India, 232
in New Zealand, list, 98	manual, 1543
physiological, 96-9, 142, 162, 318, 338, 348,	in Mauritius, 233
349, 356-8, 468, 471, 472, 531-4, 636, 734, 735, 953-62, 1046, 1047, 1089,	in Punjab, 231
134, 130, 903-02, 1040, 1047, 1089,	in S. Rhodesia, 1296
1222, 1223, 1351-8, 1391, 1394-7, 1420, 1447, 1464, 1528	Eruca sativa as oil plant, 1098 Eskimo, plants used by (850)
1447, 1404, 1040	Esamo, plants used by, (800)

Essential oils—	Fertilizers and manures (continued)—
determination in plants, 849	rubber, 282, 283, 701, 702, 1199, 1200
oranges for, 196	1486, 1487
plants in U.S.S.R., 622	in sand culture, interaction of N, P and K
Ethylene—	(921)
in apples, 728	soil injection with, 833
and banana ripening, 370 and colouring of fruit and vegetables, 729	and soil properties in tropics, (237)
emanations from fruit, 728, 1225	storage affected by, in apples, 70 strawberry, 1343
induces flowering, 1212	sweet potato, 1140
treatment of fruits and vegetables, 329, 333,	tea, 255, 256, 1445, 1567, 1571
334	tomato, 1064, 1068-71, 1390
Eucoila pelleranoi, 1373	vegetable, 584, 1380, 1381
Euphorbia Lathyris, resins in, 1100	vine, 942
Eurytoma fellis, biological control of, 650	Fetola disease of oranges, 206, 1419
Evergreens, effect of indolebutyric acid on, 1279	Fibre—
Excavation, method of tree, 1319	Agave cantala, 1434
Exhibition, Moscow Agricultural, 418	broom, 1103
Experiments, error in horticultural, (850)	plants, 1399
Experimental—	Thespesia Lampas, 246
design, (1304)	Fig— at Nikita, U.S.S.R., work on, 482
results, analysis, 451, 452 Explosives in coconut cultivation, 711	pests, 548, 1263
Explosives in coconut cultivation, 711	Films on agriculture, 477
	Fireblight, (1378)
Factorial design in greenhouse experiments,	Fires, bush, soil micro-organisms and, 1163
1303	Flax growing, (1588)
Farina from potato, 586	Flora—
Fertilizers and manures—	of Far East, (1304)
apple, 70, 896-8, (921), 1325, 1327	of Madagascar, (673)
banana, 1209	of Syrian Desert, (226)
cacao, 1188, 1463	Ukrainian, 1551
cassava, 1438	Florial abortion in olive, 215-17
celery, 592, 1058	Floriculture, cloth houses for, 173 Flower growing, 173-88, 618-25, 1106-14, 1401-5
cherry, 71 cinchona, 1474	Flower—
citrus, 201, 202, 635, 1121, 1127	breeding, 1576
coconut, 1500	forcing, 1260
compost, 234, 283, 665, (921), 1259, 1295,	investigations at John Innes Institution
1444	437, 1576
copper, for sugar beet, 1045	low temperature effect on, 1359
cover crops, 284, 435, 904, 1123, 1124, 1325	production, commercial, 425, 426
for deciduous fruit trees, (921)	storage, 1524
derris, 241	Flowering—
grapefruit, 201, 202, 1127 green manuring, 262, 637, 666, 685, 827-30,	induced by grafting, 29
904, (1335)	time, different aspects, 846 Fluorescent lamps as source of light, 843
leaf diagnosis of needs, 894	Food—
and lemon hardiness, 1125	composition, Medical Res. Coun. Rep., 769
lettuce, 1385	Investigation Bd A.R., see separate abstracts
mandarin, 635, 1121	investigation, index to literature, 1271
minor element, (921)	and life, U.S. Dep. Agric. Yearb. 1939, 789
mushroom, 612	Forcing methods, 1260
nitrogenous, 71, 202, 236, (237), 635, 891,	Fort Vermilion Station, Alberta, 1560
897, 1445	Frames—
NPK, 70, 76, 201, 235, 256, 584, 612, 701,	acetate films for glass in, 1063 heating, 1030
702, 896, 898, 942, 1042, 1057, 1121, 1125, 1127, 1140, 1188, 1200, 1209, 1327, 1343, 1380, 1381, 1385, 1438,	heating by hot springs, 1033
1327 1343 1380 1381 1385 1438	mechanically run, 583
1463, 1500	Frameworking of fruit trees, 69, 863
oil palm, 1497	Freezing for preservation of—
peach, 899, 900, (921)	raspberry, 1229
penetration in argillaceous calcareous soils,	strawberries, 371, 1229
36	vegetables, 372
phosphatic, 236, 900, 1487, 1497	Froghopper—
potassic, 503, 899, 1068-71	causes angular leaf spot in apple, 985
potato, 135, 136, 1042	pyrethrum control of sugar cane, 1168
raspberry, 76	wattle, so-called, 1157
	01

apple, 93	statistics, methods of preparing, 412
in Esthonia 1939–40, 970, 971	trees—
to flowers and buds, 1359	ecological differentiation, 480
plum cankers, 529	leaf roller, 1372
glazed, in England January 1940, 526	shoots, mineral content, 1322
Frost protection—	of Trinidad, native and introduced, 1203
central heating, 204	varieties of Transvaal, wild, 209
citrus, 204, 205, 638, 639	Fruiting—
cultural methods, 95, 204	accelerated in seedlings, 1310
in Esthonia, 970	affected by nitrogenous manuring, 71
heaters, 92, 204, 205, 527, 638, 968, 969 humidified heat for, 969	Fumes, factory, and vegetation, 1266 Fumigation—
lemons, 639	
in North Africa, 92	and fumigants, 238 of stored articles, 317, 1218
oils and oil emulsions for, 94	Fungi-
paper covers in vineyard, 528	biological control of Pulvinaria aurantii h
steam, 204	647
screens, 528	edible and poisonous, 421
varietal limits of resistance, 966	in Ukraine, 979
vine, 95, 967	Fungicides, protective, 1374
watering as means of, 204	Fusarium—
wind machines, 204	bulbigenum, 1113
against winter injury, 93, 94	wilt in tomato, (1400)
Frost resistance—	Fusicladium dendriticum, see Venturia inaequali
apple, 964	Conto
breeding for, 858 citrus, 203-5, 574, 1414-16	Garden—
limit of varietal, 966	produce storage, (1588)
peach, 965	rubbish as manure, (1588) Gardener, the skeptical, 768
Frozen pack preservation, 371, 372, 1229	Garlic, 589
Fruit—	Gas-
bud, apple, 63, 64	fuel from cherry stones and walnut shel
bud differentiation in deciduous fruit trees,	759
62	storage, 323, 332, 339, 375, 1221, 1222, 122
crops, manual, 1546	1228, 1230, 1514, 1515
dietetics, 1216	Genetics of pears, 483
drying, see Dehydration	Glasshouse—
drop	experiments, lay-out, 1029
in apples, 73, 499, 500, 891, 892 in deciduous fruit trees, 72	plants, watering, 1032
fertilizers and, 891	soils, a mixer and sampler, 581 vegetable crops, 1024, 1025
in oranges, 644	Gliricidia as support for—
spraying to prevent, 499, 500, 891, 892,	pepper, 440
1332	vanilla, 269
flies of Malaya, 1491	Gloeodes pomigena, 643
fly—	Glaeosporium-
biological control, 1373	Musarum, 1210
contamination control, 559, 560	perennans, 108
lures, 560	Glycerine used in packing plants, 1072
Mediterranean, 990	Glypta rufiscutellaris, 1002
Fruitgrowers Federation of N.S. Wales, official Yearbook 1938-9, 442	Gold Coast Dep. Agric. Rep. for 1937-9, (450)
Fruitgrowing—	Gooseberry— × blackberry hybrids, 927
deciduous, (1335)	cultivation, 1339
development of scientific, 1264	magnesium deficiency in, 1352
in Libya, 45	Gourd selection, 597
manuals on, 1546	Grafting—
in Prince Edward Island, 1306	apples, 861
in Western Cape Province, S. Africa, 1305	to induce flowering, 29
Fruit—	monocotyledons, 475
measurement, the circumeter for, 915	technique, 947, 1313
pressure guages, 381	wax, 861, 947 Grape, see Viticulture
set— factors affecting 883	Grape, see viticulture
factors affecting, 883 soil moisture and, 1119	Grapefruit—
and spraying, 880, 884	cold injury in store, 356, 357 juice, lactic acid from, 752
size and quality related to seed number, 65	manuring, 201, 202, 1127
	2

atomaca 256 257	diowin—substances (commuta)—
storage, 356, 357	trials at Wisley, 9, 795
in Trinidad, 201	and tropical shrubs, 1161
pholitha molesta, 561, 1002, (1378)	use under vacuum, 819
enhouse experiments, factorial design in, 1303	and vine cuttings, 1346
nada Dep. Agric. A. R. for 1938, (450)	vitamin B_1 as, (460), 820, 1274, 1280
oundnut	vitamin C as, 1273
the Bambarra, 1147	use in viticulture, 459
in Northern Nigeria, 709	water plants and, 20
rosette vectors, 1207	water plants and, 20 Guayule in U.S.S.R., 1144, 1145
owth—	Gully control, 1296
	Gum—
differential, auxin test for, (821)	
factors, effect on green plants, 453	in plums affects canning, 1528
-phase concept, vernalization and, 462	source of, in Ceylon, 312
substances	
in agar, 816	Hail, vine protection in Beaujolais against, 91
and bean cuttings, (460)	Hall, Sir A. D., essays presented to, 1264
and bean seeds and seedlings, 7	Haltica ampelophaga, 556
and bilberry cuttings, 449, 1341	Hambletonia pseudococcina, 1509
bios group as, 1275	Hardiness—
and blook overant outtings 025	
and black currant cuttings, 925	affected by activity of growth processes in
blossom inducing, 454	citrus, 1414
boron interrelation with, 817	in lemon, factors affecting, 1125, 1126
and cabbage, (460)	Hardy varieties grown in Canadian N.W., 1559
Canadian research on, 780	Hawaii—
and coffee, 438, 1179, 1451	agric. Exp. Stat. A. R. for 1939, 776
crown gall bacteria produce, 16, 17	ecological survey, (674)
environment and, (460)	Heat damage to grapes in field, 530
and ericaceous plants, 1107	Heaters, orchard, 92, 527, 968, 969
for evergreen and softwood deciduous	Heating, industrial wastes used for, 1030
cuttings, 798	Hedges, ornamental, in Florida, 174
extraction by alcohol, 815	Helopeltis in cacao, control, 1192
in form of dust, 780	Hemileia vastatrix in coffee, 1571
fruit development affected by, 1060, 1067	Hemp-
incorporation in seed dressings, 19	physiology of development, 1104
inhibiting effects, 813	vascular disease of manila, 680
light stability, 818	Herbicides, 1007, 1503; see also Weeds
and Lonicera tartarica, 14	Hesperides, golden apples of, 189
manual, 1545	Heteroauxin—see also Growth substances
	and Brassica meristem growth, 1281
mixtures, effect of, 796	
and Norway spruce cuttings, 5, 10-12,	estimation, 1276
802, 803	Heterodera marioni on Areca rubra, 1195
and nutrition of plant, (460)	Hevea—see also Rubber—
for oat seeds and seedlings, 7	brasiliensis, proteins, (1258)
and ornamentals, 13	Histology of apple fruits, 1321
and parthenocarpy, 811, 812, (821), 889	Honey plants of U.S.A., 876
and pea seedlings, (460)	Hop—
and pecan rooting, 85	cultural treatments, 1091, 1093
and photosynthesis, 457, 810	growing in U.S.A., 1398
and phototropism, 474	industry, 1091
	mutation rate affected by heat, 1094
and pollen germination, 455	
and potato, 6	picking, mechanical, 169
pretreatment with alcohol before using,	production—
799	in Oregon, 1092
and Prunus spp., 860	in U.S.A., 1090
and radiation, 809	research at East Malling, 168
review of work on, 3, 794	Hoplocampa spp., 1003
riboflavin as, 1273	Hormones—see also Growth substances—
Rootone, 447	florigen or flowering, 454
and seeds, 805-8, 1283	for rubber propagation, 281
and seed damaged by formaldehyde, (460)	Horticultural Education Association occasional
shoots and roots induced by, 796	publication Nov. 1939, 434
spraying to prevent fruit drop, 499, 500,	Horticulture, Miscellaneous, 1-42, 451-78, 793-850,
891, 892, 1332	1272-1304
and sub-tropical fruit plants, 1137	Hotbeds—
talc as carrier, 15	electric heating, 1140
and tea, 254, 1280	thermofertyl for heating, 582
and tomato, 1066, 1067	Hot water treatment of bulbs, 186, 187

Humus affects available phosphorus, 829	storage under CO ₂ pressure, 386, 748
Hura crepitans, 272	strawberry, 1249
Hydrogen swells, studies, 1526	sulphuring fruit, 1244
Hydroponics, see Water cultures	turbidity caused by frost, 749
Hygrostat, a Russian, (42)	vitamin C in fruit, 1249
	Jute in U.S.S.R., 668
Illinois agric. Exp. Stat. A. R. for 1936-7, 777	
Illustration Stations, Canada, progress Rep.	Kaki—
part II 1935-8, 1559	pests, 1263
Imperial agric. Res. Inst. N. Delhi, sci. Reps. for	rootstocks, 1146
1937-8 and 1938-9, (450), (1589)	in U.S.A., 1424
Imperial Bureau of Horticulture and Plantation	Kapok—
Crops, work of, 193	budded versus seedling, 679
Imperial Bureau of Horticulture and Plantation	in French Indo-China, 245
Crops, tech. Commun. 13, 772	Karaganda steppe, hardy varieties grown in, 48
Imperial Coun. agric. Res. India, A. R. for 1939-	Karassia plum stock, 486
40, 1572	Keladi, see Colocasia esculenta
Import and export legislation, 410	Kenya Dep. Agric, A. R. for 1938, 438
India, agriculture and animal husbandry in 1937-8, 1571	Kright Thomas Andrew in memoriam
India Govt. Dep. Educ. Health and Lands 6th	Knight, Thomas Andrew, in memoriam, 1 Kodur, citrus nursery technique at, 190
Rep., 1573	Kohlrabi cultivation in Ceylon, 308
Indian Farming, first number, 790	Romiabl cultivation in Coylon, 500
Indian Tea Ass. A. R. Sci. Dep. for 1938, 435	Lactic acid from grapefruit juice, 752
Indolylacetic acid, 1276, 1278, (1284); see also	Lampronia rubiella, 990
Growth substances	Land reclamation by caper, 616
Indolylbutyric acid, 1279; see also Growth	Lange Ossekampen, A. R. for 1938, 1577
substances	Lanzon—
Injection—	marketing in Philippines, 1208
fruit tree, 894	soil medium for seedling, 1204
leaf, 894, 1391	Laspeyresia—
soil, with fertilizers, 833	funebrana biological control, (563)
Insecticide—	pomonella, see Codlin moth
materials of vegetable origin, a survey, 1267	Latex—
poison plants, American and Asiatic, 239	coagulants for rubber, 406, (407)
Insects—	specific gravity, 762
beneficial, 120	Lavatera thuringiana, a fibre plant, 1399
of citrus and other sub-tropical crops, 1263	Lavender cultivation, 619
noted at East Malling in 1939, 990	Leaf—
Institut national pour l'étude agronomique du	analysis of peach, 671
Congo belge, A. R. for 1938, 436 Iowa agric. Exp. Stat. A. R. for 1938-9, 1574	area—
Iron absorption of citrus from magnetite, 193	and grape composition and growth, 93 944
Irrigation—	and raspberry production, 950
citrus, 203	crop ratio in coffee, 258
and moisture requirements in N. Africa, 905	diagnosis, 135, 136, 504, 839, 894, 1390
by spray, 38	: fruit ratio and quality of grape juice, 525
underground, 37	functions in coffee, 259
a simple water lifter, 1431	hopper in citrus, control by whitewash, 113
in Western Transvaal, 39	injection, 1391
	sampling technique, 840
Jamaica Dep. Agric. A. R. for 1938, 1575	temperatures, (847)
Jau Jumur, a desert starch plant, 224	water movements in, 841
John Innes Institution A. Rs. for 1938 and 1939,	Legislation, import and export, throughout th
437, 1576	world, 410
Juice	Leguminous plants, viruses, (1086)
apple, 387, 388, 750, 751, 754, 1248	Lemon-
black currant, 1249	black pit, 640
canning of fruit, 387, 750	colouring affected by presence of mould fruit, 1233
citrus, 389	iruit, 1233
clarification, 744, 745	frost protection, physiological result
concentrates, 746, 747, 1247, 1248	winter covering, 639
fruit, 386-9	grass, 310, 311
grape, composition, 754	hardiness—
grapefruit, lactic acid from, 752 orange, 1270	affected by manuring, 1125 increased by light restriction, 1126
pineapple, 1270	leaves, sugar fluctuation in, 634
P-modPho, 1210	icaves, sugar nucluation in, oor

emon (continued)—	Magnesium deficiency—
leguminous crops for, 1124	in apple, 960, 962
manuring affects hardiness, 1125	in cauliflower, 1054
Phytophthora hibernalis in, 1130	symptoms in deciduous fruit trees, 96.
storage, 358, 359	1352
strains, improved, 1116	Maguey leaf structure, 1434
summer, production in Palestine, 1418	Malaya—
temperature, sudden changes affect, 200	agricultural statistics 1938, (450)
epidosaphes beckii, (648) ettuce—	Dep. Agric. A. R. for 1938, 440
Cheshunt experiments, 1025, 1026	Maleuturpes spinipes, 445 Mandarin—
cultivation in England, early, 153	fertilizers, 635, 1121
germination stimulated by sulphur com-	and sudden temperature changes, 200
pounds, 154	Unshiu, 199, 1121
under glass, 1025, 1057	Manganese—
light restriction, 1056	and citrus, 192, 1122
manuring, 1385	deficiencies, 192, 636, 1122, 1397
phasic development, 1056	deficiency symptoms, 1351
potash deficiency tests, 152	onion response to, 1049
rot, 591	in wine, 1245
in sand culture, 1057	Mango
stalk investigations in cabbage, 151	anthracnose, 290
varieties in Holland, 590	diseases, 706, (1214)
eucaena glauca, 1456	fruit characters of Puertan, 1492
ibya, fruit and vine growing in, 45	relation of growth to bearing, 1205
icania rigida and its oil, 273	research at Kodur, 708
ight effect	Mangold seed production, 585 Mangosteen varieties, 1493
on plant growth, 604	Manual—
on frost resistance, 1416	bee keeping, 59
on tobacco, 1171	flower forcing, 1260
fluorescent lamps as source of, 843	gardening, 768
intermittent, supplementary, (847)	growth substances, 1545
restriction increases hardiness in lemons,	hardy fruit growing, 1546
1126	insecticides of vegetable origin, 1267
ightning injury to potato tubers, 1043	longevity of plants, 1262
ilium formosanum, tetraploidy induced in, 1112	pests of citrus and sub-tropicals, 1263
ily, Creole Easter, (1114)	plant protection, 1265
ime—	propagation of plants, 409, 1265
rootstocks for, 1115	soil erosion, 1543
the sweet as rootstock, 632	vegetable crop production, 766
imnophilus lunatus, 1059 inseed—	vegetable crop production in tropics, 1547
in Burma, economics, (313)	1548 vegetative propagation of tropical and sub
for growing in England, (1588)	tropical crops, 772
itchi storage, 1238	water cultures, 767, 1544
ittle leaf, 1355	Manures, organic versus inorganic, 1294
oganberry—	Manuring—see also Fertilizers—
cane spot, 986	affects hardiness in lemon, 1125
canning, 1492	Marasmius perniciosus, 1191
chromosome number, 922	Markets
origin of, 922	at Montreal, 1334
ongevity of plants, 1262	at Ottawa and Toronto, 920
ouisiana agric. Exp. Stat. A. R. for 1937-8, 439	section bulletins in Burma, 313
ow temperature effects on buds and flowers,	Marketing fruit and vegetables in New York, 52
1359	Masters Memorial lectures 1938 and 1939, 22, 23
	Mauritius Dep. Agric. A. R. for 1938, (1589)
Tacadamia ternifolia, 291-3, 1206	Mealybug—see also specific pests—
facDougall, Daniel Trembley, 2	on apple, (1378) citrus, 1581
Tacrocentrus ancylivorus, 1002, 1270	on strawberry, 123
Tacrosiphon solanifolii, 101, 992	in S. America and their predators, 225
adagascar flora, (673)	Mediterranean fruit fly, 990
adras—	Melon—
Dep. Agric. Sub. Officers, A. R. for 1938-9,	growth substances aid fruit set, 1060
(779)	seed treatment, 597
Dep. Agric. Report on operations for	storage, 344, 374, 1517
1938-9, 778	varieties, 596

Mercury compounds for seed treatment, (460)	Narcissus (continued)—
Merodon equestris, 1404	forcing, soil affects, 182
Meta for slug and snail control, 677	pests, 422, 1404
β (-4-methylthiazolyl-5)-alanine, response of	weed control, 182 National Inst. agric. Bot., Cambridge, A. R. fo
excised tomato roots to, (1284) Mice control, 1004	1938-9, (1589)
Micro-analysis of salts and organic acids in plants,	Nebraska agric. Exp. Stat. A. R. for 1939, (1589) Nectarine—
Micro-determination of minerals in plant ash, 1285	growing in England, 48
Micro-elements, boron and, 467	storage, 343
Micro-incineration and ash analysis, (921)	Nematode(s)—
Mildews of ornamentals, powdery, 1109	of agricultural crops, 415
Mimosa vascular wilt, 625	chrysanthemum, 177
Mineral—	in Ĥawaii, (1510)
elements in plants, determination, 464,	-resistant rootstocks, (866)
894, 895	of stone fruit, 122
uptake affected by ringing, 1298	of tea, 687
Minor elements, deficiency symptoms, 1351	Neofabraea malicorticis, 108
Mitchurin's	Nephelium lappaceum propagation, 440
blackthorn × Prunus domestica hybrids, 1309	New Delhi, sci. Reps. imp. agric. Res. Inst. fo 1937-8 and 1938-9, (450), (1589)
collected works, 1268 Mite—	New Guinea, climatic notes, 1430
damage done by leaf, 551	New South Wales Fruitgrowers' Federation
red spider, control, 993	Yearbook for 1938-9, 442
Moisture exchange between plant and air, 26	New York State hort. Soc., Proc. 85th annu
Mole cricket control, 221, 1583	Meet., 781
Molybdenum—	New Zealand
deficiency symptoms, 1351	Dep. Agric. A. R. for 1938-9 and 1939-40
essential to plants, 34	443, 1578
Montserrat—	D.S.I.R. A. R. for 1938-9 and 1939-40, 445
citrus rootstocks in, 1115	1579
Dep. Agric. Rep. for 1936, 1937 and 1938,	scientific and industrial research 1927-38
(450)	444 Nicotiana, stock: scion influence, 171
Morocco, apples and pears in, 44 Mosaic in <i>Prunus</i> spp., 535	Nicotinic acid, a growth factor, (1284)
Moscow agric. Exhibition—	Nigeria Dep. Agric. A. R. for 1938, 782
vegetables at, 133	Nightshade as rootstock for tomato and egg plant
vegetable planter at, 132	159
Mulberry—	Nikita—
dwarf disease, (1378)	State Gardens, Yalta, 416
seed storage, 1311	trees and shrubs at, 771
Mulching—	Nitrogen—
apple trees, 1325	fixation, biochemical studies, 830
raspberries, 922	loss from fertilizer mixtures, 235, 236
Mundulea spp. insecticidal properties, 1160	Njugo bean, 1147
.Mushroom—	Nodonota puncticollis, 1368
cultivation, 611, 612, 1085	Nomenclature of plants, rules for, 21, 478, 1293 Norway, vegetable res. Stat. A. R. for 1937-8, 44
fertilizers, 612 pests, 532, (928)	Notes on books and reports 408-50 766-99
Mutations in cherry, 53, 54	Notes on books and reports, 408-50, 766-93, 1259-71, 1543-89
Mycorrhiza—	Notocelia uddmanniana, 994
in cotton, 831	Nova Scotia Fruitgrowers Ass. A. R. for 1939
in date palm, 1149	1580
favoured by humus in soil, 1259	Nut propagation, 84
in pine seedlings, 832	Nutmeg harvesting by combine, (1158)
Mycosphaerella Fragariae, 113	
Myzus persicae, 101	Ocimum canum composition, 671
Naming plants miles for 03 450 1000	Oidium in rubber, 287
Naming plants, rules for, 21, 478, 1293	Oil
Napier grass as cover crop, 262	coconut, 401
Naphthaleneacetic acid, 800, 801, 1282; see also Growth substances	grape pip, 402 palm—
Narcissus—	cultivation, 440, 1494, 1495
bulb, treatment of supplies for Southern	manuring, 440, 1497
Hemisphere, 1403	seed, germination, 1496
diseases, 1113, (1405)	soil management, 1498
experiments at Kirton, 180-3, 185, 186	in Sumatra, 295
fly, 1404	utilization, 396

(continuea)—	Orange(s) (continuea)—
plants-	Sanguinello group of blood, 631
diseases of Southern, 1141	Satsuma, 197, 1406 soils for Unshiu, 199
essential, see Essential	soils for Unshiu, 199
Canangium, 268	sooty blotch, 643
Eruca sativa, 1098	storage, 353-5
fungi of, (615)	strains, improved, 1116
Licania rigida, 273	tangerine, loss of ascorbic acid during
Trichilia emetica, 274	storage, (1240)
Xanthium strumarium, 1096	trifoliate, studies on seedlings of, 194
zone, rotations, 1097	for Tucuman home consumption, 1409
Ylang Ylang, 268	Washington Navel, 644
nicica nuts, 273	wastage, 645
a chrysophylla, the Ethiopian olive, 214	water spot of navel, 198, 1417
gonychus ulmi, 993, 1366	water spot of haver, 196, 1417
ve—·	wrappers for fruit, 363, 364 Orchard heaters, 92, 527, 968, 969
	Oriental fruit and march moth 1001 1009 1970
aerial roots, 652	Oriental fruit and peach moth, 1001, 1002, 1270
in Algeria, 213	Origin of cultivated plants, (1304)
in Egypt and its products, 210	Ornamental(s)—
Ethiopian, grafting the, 214	powdery mildew, 1109
floral biology and effect on fruiting, 215-17	research in U.S.A., 618
fruit fall, 1151	Orycles spp. pest of coconuts, 298
grafting, 213, 214	Othreis fullonica, 1422
in Libya, 212	
oil, Portuguese production, 1255	Packing, processing and plant products, 384-407,
ovules, anatomy, 652	743-65, 1241-58, 1525-42
pests, 1263	Packing—
processing, 758	bananas, 743
propagation, 213, 214, 652, 1150	citrus, 352, 1242
selection and breeding in Tunisia, 1150	citrus trees, 1134
in U.S.S.R. at Nikita, Yalta, 211	grapes, 116-18, 347, 350
ion—	oranges, 1250
breeding, 143	tomatoes, 1393
deficiency symptoms, 142	tomato plants, glycerine used in, 1072
eelworm or bloat, 1048	Palestine—
fertilizers, 1381	citrus industry, 626
grafting, 475	Dep. Agric. A. R. for 1938-9, part I, 1581
manganese required by, 1049	review of year 1939, 626
mildew, 145	rootstocks used in, 486
miner, (1382)	Palm—
nucleic acids of bulb, (1086)	date, see Date
seed production, 144	oil, carotene in, 1538
storage, 374, 739, 1521, 1522	oil, see Oil palm
ium poppy cultivation, 613, 614	Papain—
untia—	nature of, (765)
decumana as stock food, 1213	preparation and properties, 1542
spp. in S. Africa, 577	Papaw—
ach, 594	cultivation, (657)
ange(s)—	fruit fly treatment, (1158)
abscission of fruit, 644	genetics, (657)
alcohol from, 395	respiration, (1158)
at Batum Botanical Gardens, 195	scale, 1504
blood, 631	Paper from sugar cane residues, 1536
colouring, artificial, 1250	Papilionaceae, rotenoids in, 1012
dipping experiments against grey mould,	Paratetranychus pilosus, (1378)
355	Parthenocarpy induced by growth substances,
essential oils, 196	811, 812, (821), 889
fetola disease, 206, 1419	Passion fruit—
fruit-	brown spot, 655, 1364
analysis of nutritient elements in, (1240)	pruning, 654
fall, premature, 644	in Queensland, 653
green mould and ventilation, 354	woodiness, 101, 438
mandarin, 197, 1406	Pea—
packing, 1250	inoculation studies, 1082
Penicillium infection, 354, 355	manganese deficiency and marsh spot, 1397
Phytophthora hibernalis on, 1130	mosaic, immune varieties, 610
rind colour pigments, 1120	seed protectant, cuprous oxide as, 1084
rootstocks for Satsuma, 197, 1406	seedlings, growth substances and, (460)
a a	7

Pe

Pe

Pe

a (continued)—	Pear (continued)—
vernalization, 167	scab, 109, 110, 574
viruses, 1083	sorbitol in, 328
ach—	stone cells, 757
borer, (563), 1370	storage, 322, 327-33, (351)
"buttons", 501	temperature affects ripening, 329
canning, 391	volatiles, production by, 329, 331, 1225 Pecan—
canning, growing for, 854 classification, 484	dichogamy in, (950), 1350
composition, 754	diseases, 1362
crown gall, 978	fruit—
defoliation affects growth, 1331	development, (87), (950)
ecology, 505	setting, (950)
fertilizers, 899, 900, (921)	grafting methods, 947
green manuring, 904	growth substances and, 85
growing—	heading back, 86
in Argentine for canning, 854	leaf scorch, (950)
in England, 48	nut filling, physiology of, (950)
hardiness, 671, 965, 1574	oil content, factors affecting, (950)
history, 48	pests, 1263, 1362
identification, (921)	photosynthesis, (950)
leaf—	pollination, 1350
analysis, 671 and wood diagnosis, 504	propagation, 85, 947 pruning, 86
pollination, 881	root system, 86
precooling rail shipments, 1227	warm winters affect set in, (950)
pruning, (921)	Pectic acid, chemical studies on, 1287
ringing, 1331	Pectin—
rootstocks, 486, 489, 865, 873, (921)	a citrus fruit product, 1534
shading, 906	extraction from fruits, 1534
shipping, 1227	in plant materials, 32, 1288
soil—	in stored plums, 336
covers, 904	Penetrometers, fruit, 381
moisture, 505, 1326	Penicillium—
spray injury, 126 storage, 337, 340-2, 735, 1226, 1228, 1513	expansum on apple, (1240)
thinning, 913	in grapes, 345 in oranges, 354, 355, 361, 363
transplanting, (921)	Pennsylvania—
transport, 735	agric. Exp. Stat. A. R. for 1938-9, 447
varieties for mild winters, 1308	State hort. Ass. Proc. 81st annu. Meet.
in western U.S., 853	783
yellows, 536	Pentatoma rufipes on pear, 550
ar—	Pepper—
bagging, 60, 882	growing on isle of Bangka, 1193
bud differentiation, 887	manuring, 440
canned, grit estimation in, 757	Peronospora-
compatibility, 770	schleideniana, 145
corky lenticel development and bagging,	Spinaciae, 149
60, 882 deficiency diseases, 958	Persimmon, Japanese and Oriental, see Kaki
double working, 862	Pest(s)—- in Belgian Congo, 1433
drying, 392	citrus, 1263
dwarf trees 868	control—
Entomosporium maculatum on, (128)	bacterial, 565
ethylene affects ripening, 329, 333	a review of recent, 989
ethylene emanations, see volatiles	in wartime, 1374
fruit, nitrogen fraction in, 322	in Denmark 1938, 99
gas storage, 332, 1228	of fruit and vegetables found at the por
genetics, 483	of N. York, 1217
Monostira unicostata on, 549	of stored food, 741, 1218
in Morocco, 44	of sub-tropical crops, 1263
Pentatoma rufipes control on, 550	pH, meaning of term, 825
pollination, 57, 58, 492, 881	Phenomenal berry, cane spot on, 986 Phoma citricarpa, 207
in Portugal, (852) respiration, 329, 330	Phomopsis citri, 1128
ripening by acetylene, 392	Phormium research in N. Zealand, 444
root growth, 56, 490	Phosphorus, humus affects available, 829
rootstocks, 50, 486, 488, 770, 865, 868, 1270	Photoperiod and temperature affect growth, 1108

Photoperiodic induction, interrelation of light	Plum (continued)—
and darkness, (847)	frost damage, 529
Photoperiodicity—	gas storage, 339, 1228
and lettuce growing, 1056	gumming affects canning, 1528
and pineapple metabolism, 305	in Holland, 406
Photoperiodism—	leaf analysis, 671
and cucumbers, 599	pectin changes during storage, 336
growth substances and, (460)	physiological breakdown, 338, 734
response affected by temperature, 30	pollination, 492, 493, 881
Photosynthesis	research, recent, 855
affected by sprays, 893	rootstocks, 486, 977
in apple leaves, 66, 893	sawfly, 1003
factors affecting, (847)	silver leaf, 855, 988
affected by growth substances, 457, 810,	storage, 334-40, 733, 734, 1226, 1228
1278	sorbitol in, 733
pruning and, 1330	varieties, the Padre, 853
Phototropism, a survey, 474	volatile substance produced during storag
Phyllocoptes oleivorus, 1132	337
Phyllosticta—	in Worcestershire, 47
angulata, 985	Poison plants, American and Asiatic, wit
prunicola, 543	insecticidal properties, 239
Phytophthora—	Poisonous plants of India, 675
Fragariae, 987	Pollen—
hibernalis, 1130	germination—
Pigments in ripening oranges, 1120	growth substances and, 455
Pimiento, rootgrowth, 140	tests, 494, 497
Pineapple—	longevity, 881
in Brazil, 302	plants of U.S.A., 876
canning spoilage, 1530	Pollination—
for canning, 303	almond, 492
composition, (718)	apple, 58, 492, 495, 879-81
cultivation, 1508	bilberry, 512
flowering induced by ethylene, 1212	black currant, 1340
mealybug, 1509	in bud as substitute for bagging, 878
metabolism affected by light and dark, 305	cacao, 1459-62
and nitrogen—	cherry, 492, 496, 497
fraction in shoots, (718)	of chestnut, Japanese, 948
metabolism in darkness and light, 305	of citrus affects seed growth, (1136)
in soil cultures, 304	deciduous fruit, 492, 494, 877, 1320
processing, (1258)	early, 878
rot due to Thielaviopsis sp., 307	pear, 57, 58, 492
storage, 1508	pecan, 1350
varieties in Brazil, 302	plum, 492, 493
wilt due to Pseudococcus brevipes, 306	Polyploids obtained by the use of colchicine, 45
Piri-piri control, 1005	1112
Plant(s)—	Pomegranate—
behaviour of, 22	fruit butterfly, 656
cultivated, origin, (1304)	pests, 1263
growth substances, a manual, 1545	Poncirus trifoliata seedlings, 194
hormones, a survey of work, 3	Poppy—
insecticidal, 239, 1160; see also particular	comparative trials of oil, in Czechoslovaki
plants	139
names wiles for 91 479 1909	
names, rules for, 21, 478, 1293 Plant protection of deciduous fruits, 91-128,	opium—
E94 70 Oct 1000 1951 70	climate affects growth, 614
524-78, 951-1020, 1351-78	in Germany, 613
Plant—	seed for bakery, 138
protection, scientific principles of, 1261	Pot(s)
Planter, vegetable seedling, 132	experiments on bitter pit, 957
Plasmopara viticola, 115	for fruit plants in tropics, 289
Plot lay-out, 24	paper, copper resinate treatment of, 1034
Plum—	wire, for plants, 620
bacterial canker, 977	Potash in soil, 502, 503
canker due to frost, 529	Potassium—
composition, (755)	availability to plants, 1068
cultivation, 47	deficiency in lettuce, 152
curculio, (1378)	determination, 465
dieback, physiological, 534	rôle of, 1069, 1070
ethylene and acetylene for ripening 334	and tomato, 1068-71

Potato	Prodioctes haemiticus, 270
blight, (1086)	Promecotheca sp., 297
discs, metabolism, (1400)	Propagation—see also Rootstocks—
grafting, 1039	almond, 486
growing in hot soils, 1041	apple, 55, 68, 69, 74, 770, 861, (921), 1312-14
growth substances and, 6	apricot, 49
in India, 724	avocado, 1153
leaf injection, 1391	banana, 299
lightning injury to tuber, 1043 manuring, 135, 136, 1042	bilberry, 449, 1341
manuring, 135, 136, 1042	black currant, 925
metabolism, (378), (1400)	cacao, 1186, 1187
rubidium absorption, (847)	cinchona, 698, 699
seed production problems, 1036, 1038,	citrus, 190, 632, 1118, 1270, 1571
1040, 1041	coffee, 261, 690, 1451, 1452
slugs, 137	coffee, 261, 690, 1451, 1452 conifers, 5, 10-12, 802, 803
sprouting, 1040	deciduous fruit trees, 69, 486, 863, (921)
storage of new, 376	egg plant, 159
sweet—	Ericaceae, 1107
breeding, (670)	evergreens, 798, 1279
cultivation, 244, 1165, 1425	kapok, 679
electrical hotbeds for, 1140	Lonicera tartarica, 14
flower acceleration, 1426, 1427	manual, 409, 1265
flowering induced by water culture, 1426	Norway spruce, 5, 10-12, 802, 803
manuring, 1140	nut, 84
storage, 1235	olive, 213, 214, 652, 1150
trials in Co. Durham, 1037	orange, 1406
in tropics, 724	peach, 489, 873, (921)
in Tunisia, (1086)	pear, 50, 770, 862
utilization of waste, 586	pecan, 85, 947
virus problem, (1086)	plum, 977
vitamin C in, 377	potato, 6
Preservation—see also Storage—	rubber, 278, 1198, 1479
of fruit in natural state or bottled, 1252	star apple, 707
of fruits and vegetables, home, 1251	sub-tropical plantation crops, 772
Preservatives for grapes, volatile, 346	tea, 254, 1173, 1280, 1442
Pressures, fruit, 381	tobacco, 171
Prickly pear, 223, 577	tomato, 159, 1066, 1067
Prince Edward Island, tree fruit varieties for,	tropical crops, 772, 1161
1306	vegetative, a review of literature, 1297
Priophorus tener, 445	vine, (83), 459, 522, 937, 1346
Proceedings—	at Vineland, 868
N. York St. hort. Soc. 85th annu. Meet., 781	walnut, 946, 1348
Pennsylvania St. hort. Ass. 81st annu.	Protochlorophyll, 842
Meet., 783	Prune—
Processed fruit, Byssochlamys fulva a pest of, 1253	composition, 754
Processing—see also particular processes—	drying ratios affected by yield, (1258)
Amorphophallus, 1541	maturity indices in Italian, (1258)
baobab, 247	Pruning—
cananga, 268	apple, 67, 907, 908, 1328, 1330
cashew nut, (1542)	coffee, 692, 1181
cherry stones, 759	deciduous fruit trees, (506), 909, 910, 1329
citrus, 394, 395, 1534	passion fruit, 654
coconut, 400, 401, 406, 1256	peach, (921)
coffee, 403, 404, 1537	pecan, 86
copra, 397, 1539, 1540	and photosynthesis, 1330
deciduous fruits, 1531	tomato, 1064, 1392
grape, 402, 1532, 1533	vine, 1347
oil palm, 396	Prunus—
olive, 758, 1255	Davidiana as plum stock, 486
orange, 395, 1250	domestica × blackthorn hybrids, 1309
pineapple, (1258)	rootstocks, cold resistance in, 873
pyrethrum, 1257	spp., growth substances and, 860
ramie, 763	spp., mosaic in, 535
sugar into rum, 1535	Pseudananas ecology, 1211
tea, (765)	Pseudococcus—
vegetables, 1531	brevipes, 306, 1509
walnut shells, 759	citri on vines, 552
ylang-ylang, 268	Comstocki, (1378), 1421, 1581
,	

Pseudococcus (continued)—	Report (continued)—
Kenyae, 438, 1182	Work of Rubber Res. Bd Ceylon in 1938
on strawberry, 123	(450)
Pseudoparlatoria ostreata, 1504	West Virginia Exp. Stat. for 1936-8, 449
Puccinia Antirrhini, 178	Reproduction, physiological factors of plant, 84-
Puerto Rico, economic background of research in,	Resins, 312, 1100
1428	Respiration—
Pulvinaria Aurantii, biological control by fungi,	in apples, 320
647	in tropical fruits in store, 366
Pumpkin cultivation in White Russia, 1387	Rhagoletis pomonella, 1369
Pyrethrum—	Rhizopus arrhizus, 112
for codlin moth, 998	Rhododendron propagation, 1107
driers, 1257	Rhubarb—
for thrips, 438	eelworm, (1086)
	historical survey, 150
Quarantine, plant, 410	Ribes spp. in Great Lakes region, 77
Queensland—	Riboflavin as growth substance, 1273
Acclimatization Soc. A. R. for 1938-9 and	Rice straw decomposition, 1164
1939-40, 785, 1582	Ricinus—
nut, 291-3, 1206	cultivation and use, 1196
passion fruit in, 653 Rep. Dir. Plant Industry 1939, 784	nutrient accumulation by, 1101
Quince rootstocks, 486, 488	as perennial in U.S.S.R., 669
Quinine, world supplies, 697	Ringing— deciduous fruit trees, 911, 1332
guillite, world supplies, 007	and mineral uptake, 1298
Radiation, absorption and reflection of, 473	peach, 1331
Radish deficiency symptoms, 142	tung oil, 1143
Radish deficiency symptoms, 142 Ragwort control, 1005, 1377	vines, 943
Ramie—	Ripening—
in Italy, 218	acetylene for, 392
processing, 763	artificial, 329, 333, 334, 392, 730
root system, 667	Roads and soil erosion, (1214)
Rape of the earth, The, 1543	Root—
Raspberry—	diseases, damage done by, 525
in British Columbia, 509	excavation, 1319
composition, 754	growth—
cultivation, 509, 1336, 1337	apple, 61, 859, 874
the Cuthbert, decline in B.C., 509	apricot, 490, 875
frozen pack, varieties for, 1229	banana, 300
leaf : fruit ratio, (950) manurial trials in Denmark, 76	coffee, 1453 deciduous fruit tree, 491
mosaic, 102, 1361	green manure crop, 666
moth, 990	and oxygen in soil, 824
	pear, 56, 490
mulching, 924 storage, 1229, 1230	pimiento, 140
Rat control—	ramie, 667
in coconut plantations, 713	scion influence on, 491
in Malaya, 230	temperature and, 874
Rays, X	tropical crop, 229
for apple examination, 732	regeneration in water and sand cultures
floral development affected by bud treat-	1299
ment with, 25	resistance and water absorption, 466
Red currant—	temperature and transpiration in cucumber
classification, 510	1061 Recellet wishility, determination of seed, 476
composition, 754 Red spider—	Rootlet viability, determination of seed, 476 Rootstock—
control, 993	almond, for stone fruit, 486
migration, 1366	apple, 55, 74, 449, 485-7, 770, 865, 867-70
Regeneration, review of literature on, 1297	1270, 1314-18, 1554, 1574
Report—	apricot, 49, 486
Gold Coast Dep. Agric. for 1937-9, (450)	cherry, 865, 871, 872, 1307, 1553
Govt. India Dep. Educ. Health and Lands,	citrus, 632, 1115, 1270, 1571, 1410-12
1573	deciduous fruit tree, (921)
imp. agric. Res. Inst. New Delhi, scientific,	in Great Britain, 865
for 1937-8, (450)	hardy, 1574
Louisiana Fruit and Truck Exp. Stat. for	intermediate in apple, (921)
1937-8, biennial, 439	kaki, 1146
Montserrat Dep. Agric. for 1936-8, (450)	lime, 1115

Rootstock (continued)—	Rubidium absorption by potato discs, (847)
Malling, in U.S.A., 867	Rubus—
nematode-resistant, (866)	aphides, 553, 1361
orange for Satsuma, 197, 1406	breeding, 923
in Palestine, 486	chromosome numbers, 922, 923
peach, 486, 489, 865, 873, (921)	spp. in China, 508
pear, 50, 486, 487, 865, 868, 1270	Rum manufacture, 1535
plum, 486, 865, 977	
quince, 486, 488	
stone fruit, nematode-resistant, 122, (866)	Safflower cultivation, 219
and storage quality, 70	Sahlbergella blast in cacao, 1189
sweet lime, 632	Saissetia olea, insect enemies of, (226)
vine, hardy, 517	Salt absorption, (847)
at Vineland, Ont., 868	Sandbox tree, 272
walnut, 865	Sand cultures, vegetable experiments in, 142
Rose	Saperda candida, 1367
diseases, 621, 624, 1110	Sawfly, plum, 1003
mosaic, 621	Scab, see Apple scab
mulching, 623	Scald, apple superficial, 318, 1223
rust, 624	Scale insects—
Rosette or little leaf, 1355	avocado, 1156
Rotations in oil crop zone, 1097	the black, predator on, (226)
Rotenoids in Papilionaceae, 1012	citrus, 646-(648)
Rubber—	Scientific Horticulture, occasional publication
in Belgian Congo, 1480	Nov. 1939, 434
budded, in Ceylon, 1478	Scientific and industrial research in N. Zealand
budding, 278	1927-38, 444
clonal seedlings, 278	Scientific principles of plant protection, 1261
clones—	Scientific Reports, imp. agric. Res. Inst. Nev
A.V.R.O.S. tapping results, 700	Delhi, for 1937-8 and for 1938-9
at Tjiomas II station, 279	(450), (1589)
composts, 283	Scientific terms, dictionary, 408
cover crops, 284	Sclerotinia-
deer control in plantations, 1488	diseases of cherry and apple, 542
drought and fire damage, 1202	Mali, 542
heat and sunscorch effects, 703	minor, 591
killing with sodium arsenite, 288	Scott Agricultural Laboratories, Kenya, coffe
latex coagulants, 406, (407)	cultural work at, 1179
manuring, 282, 283, 701, 702, 1199, 1200,	Seakale, growth substances and, 1272 Seed(s)—
1486, 1487 nursery selection, 1481	biology of woody plants, 463
oidium disease, 287	citrus, viability, 191
plant hormones for use in propagation, 281	germination inhibited by fruit juice, 1065
planting—	inoculation, 1081, 1082
density, 1476	number: size and quality of fruit, 65
material, 278, 1475	stimulation by sulphur compounds, 154
without burning, 276	storage of various, 1311
preparation of ground for, 1482	treatment—
plants—	with growth substances, 805-8, 1283
other than <i>Hevea</i> , 1489, 1490	heating and drying, 597
Russian experiments with, 1489	mercury compounds for, (460)
quality of raw, 405	Seedlings-
replanting, 277, 1483, 1484	acceleration of fruiting in, 1310
Res. Bd Ceylon, Rep. on work in 1938, (450)	light and temperature response differs from
Res. Inst. Malaya, A. R. for 1938, 441	that of cuttings, 1108
root formation, aids to lateral, 280	Sesame, delayed germination, 696
rootstocks, 1479	Sexava spp., 1502
seedlings-	Seychelles Dep. Agric. A. R. for 1938, (450)
clonal, 278	Shade—
twinning, 1198	for coffee, 688, 1456
selection, 1477	for tea, 255, 1443
as shade for coffee, 688	Shading affects woolliness in peaches, 906
specific gravity, 762	Short day plants, flowering induced by grafting
tapping—	$ ho_{\parallel}$
panel, heat and sun scorch, 1202	Silver leaf, 855, 988
slaughter, 1483	Sisal fibre length and grading, 681
systems, 285, 286, 1201, 1483, 1485	Skeptical gardener, The, 768
transplanting, pretreatment, 280	Slit-grafting, 863
	99

•	
ug control by meta, 137	Soybean (continued)—
nall fruits, vines and nuts, 76-90, 507-23, 922-50,	in Canada, 608
1336-50	in Ceylon, 309
nail control, 1135	economic importance, 166
odium—	effect on soil 1079
arsenite as herbicide, 1503	effect on soil, 1079 eleven years' investigations, 1078
for killing rubber trees, 288	nutrition of, (1086)
chlorate injury to crop plants, 578	planting methods, 1396
dinitro-ortho-cresylate for weeds, 617	root tubercles, 1081
hphoh Khasi as apple rootstock, 1554	seed—
il(s)—	inoculation, 1081
absorption processes, (42)	viability affected by age, 609
acidity and fruit growing, 902	varieties, (1086)
acidity and sulphur dusting, 903	Spectrochemical methods, 895
and coconut nut fall, 296	Spectographical methods, (921)
conservation in the tropics, (1510)	Sphaceloma Perseae, 1155
erosion—	Spinach—
in Basutoland, 1555	downy mildew, 149
control by sowing Hothus corniculatus,	viruses, 1055
1139	Spineless cactus as stock food, 1213
in Cyprus, 40	Sports, cassava, 248
and humus, 826	Spray(s)—
in India, 231, 232	apple, 999, 1018, 1019
land movements and, (1510)	arsenic, 1018, 1019
manual, 1543	bordeaux, 113, 207, 301, 574, 641, 655, 980
in Mauritius, 233	983, 986, 1130, 1155, 1364
roads and, 1214	contact angle effect, (568)
in S. Rhodesia, 1296	copper, 569
on tea estates, 1446	cresylic acid displaced by tar oil, (1378)
in U.S.S.R. humid sub-tropics, (1158)	damage—
factors and tree growth, 822	to apples, 572, 1017
flooding induces cork in apple, 959	lime-sulphur, 1016
fumigation, 1064	to peaches, 126
injection with fertilizer, 833	effect on cherry fruits, (1020)
micro-organisms and bush fires, 1163	efficiency, factors affecting, 1374
and mineral content of shoots, 1322	fluorine compounds in, 1019
moisture—	fruit set, to prevent, 880
detection, 823	fungicide-insecticide, 567
and fruit set, 1119	lime-sulphur, 980, 983, 986, 1013, 1016
and peaches, 505, 1326	1074, 1366
and walnuts, 1349	machinery, 1009
for oranges, Unshiu, 199	materials, substitute, 1375
oxygen and root growth, 824	mineral oil, 1015
pH, meaning of term, 825	orchard, in Denmark, 1010
phosphate and potassium movements in,	photosynthesis affected by, 893
(921)	and powders, sulphur, 1013
potash determination, 502, 503	to prevent fruit fall, 1332
productivity, soya beans and, 1079 sampler and mixer of glasshouse, 581	programmes, practical aspects, 1374
tomato, 1064	residues, 573, 1018, (1378) Solbar, 570
illess growth of plants 28 74 767 848 1544	sulphur proteinate of mercury, 1014
illess growth of plants, 28, 74, 767, 848, 1544 Janum spp. from the New World, 587	summer—
lar radiation and coffee growth, 1454	in Denmark, 566
oty blotch on citrus, 643	oil, 999
rbitol—	surface tension effect, (568)
in pears, 328	thiocyanates, 572
in plums, 733	in wartime, 1008
uth Africa—	wetting and spreading properties, 567
Dep. Agric. A. R. for 1938-9, 448	Spruce, growth substances for Norway, 5, 10-12,
fruit exports, deciduous, for 1937-8 and	802, 803
1938-9, 851, 1269	St. Lucia, citrus rootstocks in, 1115
weeds of, 127	St. Vincent Dep. Agric. A. R. for 1938, 788
uth Australia, Minist. Agric. A. R. for 1938-9,	Staking of orchard trees, 864
787	Star apple, soil medium for seedling, 1204
uthern Rhodesia, plant diseases, 651	Starch plant, desert, jau jumur, 224
ybean—	Statistical—
boron in nutrient solution affects calcium	analysis, (850)
accumulation, 1080	method in field trials, 451, 452

So So So So

Statistics—	Storage (continued)—
agricultural, Malayan, for 1938, (450)	temperature, automatic control, (383)
fruit and vegetable, methods of preparing,	tomato, 374, 380
412	tropical fruits, 365-70, 738
Stereum purpureum, 855, 988	vegetable, 316, 372-80, (742)
Stocks, bacterial disease of Matthiola incana, 175	vegetable seed, 1035
Stone fruit—	and vitamins, (1240), 1521
Clasterosporium carpophilum damage, 544 rootstocks, nematode resistant, 122, (866)	volatile products liberated during, 321, 331
shot hole disease, 543	wax for fruit skins, 1219, 1231, 1516
Storage, 314-83, 726-42, 1215-40, 1511-24	wrappers for use in, 318, 362-4, 1223, 1234
Storage—	Zbarsky's bactericide used in, 316
apple, 70, 318-26, (351), 727, 728, 1221-5	Strawberry—
banana, 367-70, 1236-8, 1519	aphids, 124, 992
broccoli, 375, 1520	beetles, 558
cabbage, 374	Belle de Châtelaine, 514
Capetown precooling store, 382	Clivina rugithorax on, 557
CO ₂ removal by use of lime, 1515	composition, 754
carbon losses during, 733	crinkle, 123, 974
carnations, 179	cultivation, 928, 929
carrots, 379	ever-bearing, large-fruited, 79
cauliflower, 1520	frozen pack preservation, varieties suitable
cherry, 1228	for, 1229
chico, 1238	hardiness, 515
citrus, 352-63	hot water treatment, 976
coffee seed, 263	in Isle of Ely, diseases of, 975
cooling of fruit, 315	juice, 1249
Covent Garden laboratory, (383)	leaf roller, 562
cucumber, 740	leaf spot, 113
date, 737	manuring, 439, 1345
delayed, 327	mealybug, 123
ethylene in relation to, 728	mulching, 929
fan, a reversible, (383)	Phytophthora disease, 987
farm, cold, 1511	in Portugal, 928
flower, 1524	red core disease, 987, 1365
foodstuffs in the British Colonies, 1235	ripening, methods of retarding, 1342
frozen pack products, 371, 372, 1512	scorch, 113
of fruits in general, 1270, 1579	in Scotland, 513
of fruit and vegetables, principles of cold,	spacing, 439
1215	storage by freezing, 1229
gas, 323, 332, 339, 375, 1221, 1222, 1224,	storage, gas, 1230
1228, 1230, 1514, 1515	transplanting, 78, 439
of garden produce, home, (1588)	varieties, 514, 930, 1229
grape, 345-50, (351), 736 grapefruit, 356, 357, 1231	virus, 123, 973-5
grapetruit, 350, 357, 1231	Wisley trials, 930
* lemon, 358, 359	yellow edge, 973-5
litchi, 1238	Sub-tropical(s)—
mango, 1238	crops, pests of, 1263
and manuring effect, apple, 70	fruit plants, growth substances for, 1137 in Kazakh, S.S.R., 1138
melon, 344, 374, 1517	nlantation arong respectative arong section 77
nectarine, 343 onion, 374, 739, 1521, 1522	plantation crops, vegetative propagation, 77
orange, 353-55, 1238	Sugar beet, 838, 1044-6, (1086), (1588) Sugar cane—
orchard, 726	climatic optima, 1436
peach, 337, 340-2, 735, 1226, 1228, 1513 pear, 322, 327-33, (351), 1228	froghopper, 1168 industry in Antilles, 1167
pear, 922, 927-99, (991), 1226	investigations in Trinidad, (450)
pests, 317, 741, 1218 pineapple, 1508	manuring in Brit. Guiana, 1435
plum, 334, 733, 734, 1226, 1228	residue, paper from, 1536
notato 377 378	Sugar determination in plant tissues, 31
potato, 377, 378 potato, new, 376	Sulphamates for weed control, 1007
precooling peaches before, 1227	
quality affected by rootstock, 70	Sulphur— dioxide—
raspberry, 1229, 1230	release in packed grapes, 347
seed, 1035, 1311	effect on vegetation, 1266
in S. Africa, 382	dust and apple scab, 984
stacked boxes, resistance to air flow, (383)	and soil acidity, 903
strawberry, 371, 1229, 1230	traces in canned fruit, 1527
22.27, 011, 1220, 1200	2.3000,111 Outiliou 11410, 1021

Sulphuring wine and fruit juice, 1244	Terracing, orchard, 901
Sultana dipping, vine ash substitute for potash in, 1532	Texas— agric. Exp. Stat. A. R. for 1938, (1589)
Sunflower	grape production, 1345
chemistry of, 1102, (1105)	Thallium toxicity, 1089
as indicator of boron deficiency, 1354	Thermo-fertyl for heating hotbeds, 582
Sweda plum stock, 486	Thermometer—
Swede-	in orchard heating, 968
cultivation, 141	storage, 383
seed production, 585	Thespesia Lampas, a fibre plant, 246
Swedish Acad. Agric. A. R. for 1939, 786	Thielaviopsis ethacetica in pineapple, 307
Sweet potato, see Potato	Thinning—
Synanthedon exitiosa, 1370	apricots, 912
Syrian desert flora, (226)	peach, 913
Syrup, preparation of fruit, 388	by spraying, 880
	Thiocyanate spray and colour of apples, 919
Tanganyika Dep. Agric. A. R. for 1938, (450)	Thiourea stimulates lettuce seed germination, 154
Tannia, 249	Thrips—
Tapinoma simrothi, 564	banana, 717
Tar oil to prevent fruit set, 884	citrus, 1133
Taro—	coffee, 1183
in Hawaii, 250	as virus vectors, 1075
in Malaya, 721	Tobacco—
Tea—	in Burma, economics of, (313)
anatomy of leaf and stem, 684	diseases in Canada, 1395
Armillaria mellea, 1176 in Assam, (1589)	frenching, 1089
in Azerbajian 1179	frog eye, 251 grafting, 171
in Azerbaijan, 1173 bitten off disease, 1447	light affects growth, 1171
Boga medeola as green crop for, 435	manuring; 1087
botanical name, 252	in New Guinea, 1440
climatic and soil needs, 683	in New Zealand, 444
compost manures, value to, 1444	physiology of plant, (172)
cover crops, 435	Res. Stat. Coffee, Rubber and, A. R. for
cultivation, 683, 1173, 1174	1938-9, 1570
cuttings, growth substances and, 254	soils, 1087
fermentation, (765)	thallium toxicity, 1089
green manuring, 435, 685	types and varieties, 1087
improvement, 253	viruses, 1088, (1400)
in Krasnodar, 1174	Toklai exp. Stat.—
manuring, 255, 256, 440, 1444, 1445, 1567,	a guide to, 1172
1571	A. R. for 1938, 435
moth control by Trichogramma, 1177	Tomato—
nematode, 687	acetate films instead of glass for forcing, 106
phloem necrosis, 686	artificial lighting, 604
plant hormones and, 254, 1280	bacterial canker, 605
research conference, Ceylon, 1441	in Brazil, 601
research institute of Ceylon A. R. for 1939, 1567	calcium affects fruit firmness, 1071, 1254
	canning, 602, 1071, 1254
research institute of Ceylon index of publications, 1566	cardboard containers for growing, 1026 cultivation—
root diseases, 1175, 1176	in Georgia, U.S., 1388
seed	in Queensland, 600
production, 1442	diseases—
treatment, 1173	in Texas, 1073
selection, 257, 682	in Victoria, 161
shading, 255, 1443	in West Indies, (725)
soil erosion, 1446	evaluation of canning, 602
tree oil, 1194	fertilizers, 1064, 1068-71, 1390
in U.S.S.R., 682, 683, 685	fruits affected by manuring, 160
windbreaks for, 688	fruit composition, 380
Temperature—	Fusarium wilt, (1400)
changes affect lemons and mandarins, 200	grafting on nightshade, 159
control cabinet, 27	and growth substances, 1066, 1067
photoperiod and, affect growth, 1108	injection of leaf to determine minera
and response to photoperiodism, 30	deficiency, 1391
and root growth, 874	leaf diagnosis, 1390
Tormite damage and control 901	' leaf mould 163 606 1074

Tomato (continued)—	Tsampedak, 704
light effect on, 604	Tulip—
metabolism, 1069, 1070	experiments at Kirton, 180-4, 186
packing, 1393	forcing, soil affects, 182
paper pots for, 1034	fringed and parrot morphology, (960)
plants, glycerine used in packing, 1072	weed control, 181
potassium availability to, (1400)	Tung oil
potassium nutrition and metabolism, 1068-71	in Abkhazia, 661
pruning and training, 158, 1064, 1392	in Caucasus, 1142
puffing, 162	composition, (1084)
in Queensland, 600	cultivation, 658, (664)
ripening by ethylene, 729	in Cyprus, 660
rogue plants among, 157	in Georgia, U.S.S.R., (664)
roots and zinc deficiency, 1394	girdling methods, 1143
sleeping disease, 1076	industry, a review, 411
soil fumigation, 1064	in Kwangtung and Kwangsi, 662
soil pore space, 1064	in Malaya, 663
spacing, 603	root development, (1158)
spotted wilt, 1075	selection, 220
stem rot. 607	in U.S.A., 658
storage, 374, 380	in U.S.S.R., 661, (664), 1142
training, 158	variation in fruits, (1158)
vernalization, 1062, 1389	Turnip vernalization, 461
Verticillium wilt, 1076	Tylenchulus semipenetrans, 649
virus diseases, 1027, (1400)	
wilt diseases, 1027	
zinc deficiency affects roots, 1394	Uganda Dep. Agric. A. R. for 1938 and for 1938-
Topworking—	(450), 1585
apple, 68, (921)	Ukraine fruit varieties, 417
fruit trees, 68, 69	Ukrainian flora, 1551
Tortrix caterpillars, incidence in 1939, 990	Uncinula spiralis, 545
Tractor, the farm, 1300	United States Dep. Agric. Yearb. 1939, 789
Transpiration—	U.S.S.R.—
affects mineral salt absorption, 1298	agricultural exhibition 1939, 418
forces controlling water intake, (847)	staple crop production increase, 1023
measuring, (1304)	
root temperature and, 1061	
Transplanting—	Vanilla cultivation, 269
apple, 1324	Varieties, fruit in Karaganda Steppe, 481
big trees, 41	Vegetable growing, 129-72, 579-617, 1021-110
coffee, 1319	1379-1400
Transvaal, edible wild fruits, 209	Vegetables—
Tree fruits, deciduous, 43-75, 479-506, 851-921,	in Arctic, 134, (850)
1305-35	breeding, German aims in, 129
Trees and shrubs at Nikita, Yalta, 771	in Canadian North-West, 1560
Trichilia emetica, an oil plant, 274	canned, hydrogen ion concentration in, 152
Trichogramma control of tea moth, 1177	in Daghestan, 1022
Trichogramma evanescens for biological control,	dehydration, 761
(563)	experiments, culture in colloidal clay, 1031
Trichoseptoria fructigena, 540	garden, the, 420
Trinidad—	gardening in Minnesota, (1400)
Dep. Agric, A. R. for 1938, 1583	under glass, 1024, 1025
fruits, native and introduced, 1203	and human nutrition in the tropics, 720
Imp. Coll. trop. Agric. A. R. for 1938-9,	manual on, 766
1584	manuring, 584, 13 80
soil types, 1429	at Moscow agricultural exhibition, 133
Sugar cane Investigations, A. R. for 1939,	of Palestine coastal plain, (226)
(450)	for prairie farms, 1021
Tropical crops, 227-313, 672-725, 1159-1214,	research—
1428-1510	in Norway, 446
Tropical—	in Sweden, 1552
crop propagation, manual, 772	root, in England, 428
fruits—	seed—
latent infections in, 714	drying artificially, 130, 131
respiration in store, 366	production in tropics, 1162
storage, 365-70	storage, 1035
shrubs, growth substances for cuttings of,	statistics, methods of preparing, 412
1101	storage, 316, 372-80, (742)

Vegetables (continued)—	Viticulture (continued)—
for the tropics, 719-(725), 1162, 1547, 1548	in France and her overseas possessions, 81
watering, 579, 580	frost measures and damage, 95, 527, 528
wax as preservative for, 1220, 1523	967
Vegetative propagation—	genetic basic of breeding, (950)
review of literature on, 1297	German problems, 80
of tropical and sub-tropical plantation crops,	grape(s)—
772	
	for Canadian home use, 519
Venturia inaequalis, 109, 110, 539, 731, 980-4,	dry stalk in, 116, 117, 348
1224	handling and wastage, 116-18
Vernalization—	jelly, 1533
beetroot and turnip, 461	juice composition, 754
cucumber, 1062	packing, 116-18, 347, 350
and growth phase concept, 462	pips a source of oil, 402
pea, 167	preservation, 346, 347
tomato, 1062, 1389	seedless, 520, 932
Verticillium wilt in tomato, 1076	size affected by leaf area, 939
Vetivera zizanoides essential oil plant, 1472	storage, 345-(351), 736
Vigna sinensis, long bean, 723	wastage, 345
Vineland hort, Exp. Stat. A. R. for 1938-9, 1586	growth substances in, 459, 1346
Virachola livia, 656	hail protection in Beaujolais, 91
Virus—see also Diseases, virus—	Haltica ampelophaga pest, 556
in apple in Manchukuo, 100	hardiness in hybrids, 518
host index, (1378)	heat damage to grapes, 530
insect vectors, 101, (1378)	heat necessary to ripen Tokay, 940
work of Institute of Plant Protection,	hybrids, hardiness in, 518
Leningrad, (1587)	leaf—
in passion fruit, 101	area affects grape size, 939
peach, 536	composition and fruitfulness, (83)
in Queensland, 972	-fruit ratio and quality of crop, 523
raspberry, 102	removal, 944
strawberry, 123, 973-5	in Libya, 45
tea, 686	manuring, 942
tobacco, (1400)	mildew, 115
tomato, (1400)	nutrition affected by rootstock, (83)
vectors, (1086), 1361, (1378)	oidium, 545
Vitamin A in apples, 314	pests, 1263
Vitamin B as growth substance, (460), 820, 1274,	physiological diseases, 1270, 1358
1280	propagation, 522, 937
Vitamin C—	pruning, 1347
in apples, 314	Pseudococcus citri incidence in, 552
in canned apple, 390	ringing, 943
in fruit juices, 1249	ripening, total heat necessary for, 940
as growth substance, 1273	rootstock affects nutrition, (83)
Vitamin—	rootstocks, hardy, 517
affected by storing, in vegetables, 1521	seedless grapes—
loss in storage, (1240)	breeding for, 932
Viticulture—	relation between drop berry and seed-
ampelography, 931	lessness, 349
the Amur grapes, 936	Seedless Emperor, 934
anthracnose, (546)	Zante currant, 1344
in Auvergne, (950)	storage, 345-50, 736
Berlandieri propagation, 522	SO ₂ release in packed, 347 table grapes, 116-18; see also Grapes
Botrytis disease, 117-19, 345, 346	in Towas 1945
breeding, 520, 932, 933, (950), 1344	in Texas, 1345
budding, T, 937	Tokay vines, heat needs of, 940
chlorosis, 533	training, 1347
coulure, (83), 1357	in U.S.S.R., northward expansion, 935
court noue, 103-6	Vitis vinifera, somatic mutation in, 934
currants, 1344	Zante currant, 1344
cuttings, 459, 1346	Voandzeia subterranea, 1147
direct producers, 521, 938	
direct producers, detection of wine from,	Waite agric. Res. Institute, A. R. for 1937-8,
1245	(1589)
drop berry, 348, 349	Walnut—
drought resistant varieties, 941	caterpillar, 1371
" dying vine " disease, 1358	in Italy, 945
factors affecting growth in early years, 82	pests, 1263

Walnut (continued)—	Wine—
propagation, 946, 1348	classification, 1243
shells, gas and carbon from, 759	from direct producers, 1245
soil moisture, 1349	dry matter determination, (1258)
Water—	fruit, classification, 744
absorption, root resistance and, 466	improvement of sour, (1258)
conservation in Cyprus, 40	manganese content, 1245
core in apple, 532	maturing by sun's rays, 385
courses, protection, 233	production, German problems, 80
cress, caddis fly pest, 1059	sulphuring, 1244
cress cultivation, 1386	Winter, see Frost
cultures, 28, 74, 767, 848, 1291, 1292, 1544	Wire pots for plants, 620
cultures, apples grown in, 74	Wisley—
hot, strawberry treatment with, 976	apple trials, 46, 479
hyacinth, 576	fruit trials, 46, 479, 930
melon, (598), (765), (1086)	strawberry trials, 930, 973
plants, growth substances and, 20	Wood preservative, 1301
shoots of fruit trees, 888	Woolly aphis, 554, 869, 870
table and disease in cucurbits, 156	Wound—
Watering—	dressing, 447
glasshouse plants, 1032	phellogen, differentiation, 845
vegetables, 579, 580	Wrappers for stored fruit, 318, 362-4, 1234
Watsonia eradication, 1377	
Wattle froghopper, dusting for, 1157	Vanthiam strumgaine on oil plant 1006
Wax—	Xanthium strumarium, an oil plant, 1096
grafting, 861, 947	X-ray for apple examination, 732
as preservative for fruits, 1219, 1231, 1516	
as preservative for vegetables, 1220, 1523	Yalta, Nikita State Gardens, 416
Weeds—	Yams, 1170, 1549
biological control, 1005	Yam storage, 1235
bracken, 1006, 1376, 1377	Yautia, Xanthosoma sp., 1473
control, 617, 1005-7, 1376, 1377	Yearbook—
sodium salt treatment, 617	Calif. Avocado Ass. for 1939, 1558
of South Africa, 127	Fruitgrowers Fed. N.S. Wales for 1938-9
of South Australia, 575, 576	442
Weevil control, (128)	U.S. Dep. Agric. 1939, 789
West Virginia agric. Exp. Stat. Report for	Yebb nuts, 1166
1936-8, 449	Yellow edge of strawberry, 973-5
Western Australia fruit industry, 43	Ylang-ylang oil, 268
Western Cape Province, S. Africa, fruit growing,	
1305	Zanzibar Dep. Agric. A. R. for 1939, (1589)
White Russia, introduction of food plants into,	Zbarsky's bactericide, 316
1302	Zinc deficiency—
Whitewash for leaf hopper control, 1132	citrus, 192
Wholesalers in New York, 52	symptoms, 1351
Wild fruit resources of the Far East, (75)	and tomato roots, 1394
Windbreaks, 1360	Zinc in soil, chemical status of, 1356

